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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY Mitchell Bros Company. (INCORPORATED.) | Vol. III. | CHICAGO, ILLINOIS, JULY 15, 1884. | No. 1. | SUBSCRIPTION PRICE, ONE DOLLAR PER ANNUM.

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THE GLADIATOR POWER CORN SHELLER AND CLEANER.

The corn sheller forms an important part of every well equipped elevator and custom mill. There is little variation in the principles on which all corn shellers are based, though human ingenuity has devised an infinite variety of shapes and applications. We give on this page an illustration of the GLADIATOR POWER CORN SHELLER AND CLEANER, which has come into extended use in all parts of the country. The "Gladiator" has all the distinctive feature which rendered the old "Reading Sheller" famous, while the manufacturers have added many improvements in details, which have made it a still more valuable machine. It is well built, simple, and what is of particular importance in a machine of this kind, substantial and durable.

It does not shell against a rest, like most shellers but entirely by friction; the cylinder is not nearer the case than four inches in any position; consequently if a stone, piece of iron, or any hard substance, gets into the machine, it does not injure it, but presses it among the cobs and passes it out with them.

It is built in three sizes to meet the requirements of all classes of establishments; and we may note that the smallest size can be made (when desired) with two cranks, one at each end, in order that it may be operated by hand. The "Gladiator" is warranted by the manufacturers to be of good material and workmanship, and well finished in every respect. It is made by THE SIMPSON & GAULT MFG. CO., northwest corner of Front and John streets, Cincinnati, Ohio, who will be pleased to furnish inquirers with any desired particulars.

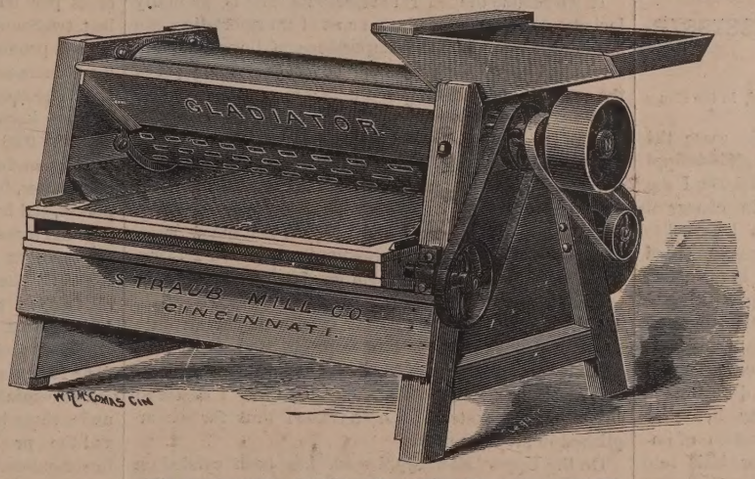
WHY THEY DO IT.

"How is it," asked a reporter of a Stockton (Cal.) paper of a prominent wheat buyer, "that you wheat men always spit out the grain you sample?" "That is easy enough to explain," said the man of cereal proclivities. 'Do you know that many a man has ruined his constitution, and in lots of instances consumption has been brought on, by acquiring the habit of eating wheat? The reason is this, the husk of the wheat somehow or other finds its way into or affects the lungs. In Mark Lane it is the custom to fine any man found eating wheat one shilling." This will be received as news by the general public.

Shawneetown, Ill., is the first place in the West to report wheat-cutting.

THE INDIANA GRAIN MEN.

The called meeting of the Indiana grain-dealers, to consider the abuses of the grain trade and the uses of mutual association and protection, convened at Masonic Hall, Indianapolis, Thursday morning, June 12. About 150 leading dealers from nearly every section of the state were present, and effected a temporary organization, with William Crim, of Anderson, in the chair, and William L. Higgins, of Indianapolis, secretary.



THE GLADIATOR POWER CORN SHELLER AND CLEANER.

The objects of the association, and the pressing need of reform of abuses that have grown up in the trade, formed the subjects of discussion, among which the practice of elevator men and boards of trade in false inspection and under grading grain were the most prominent, because the most destructive of broad trade interests. An abuse by farmers of the privileges they have had in borrowing grain-sacks, and forgetting to return them, also elicited a share of the unkind comment of that honest portion of society. It was considered an abuse of ancient privilege to furnish aprons and dish-towels for farmers' wives that had grown so great that an entire abolishment was necessary.

The practice of undergrading and false inspection was justly regarded as a menace to the trade as well as to the true interests of the producers themselves and the whole country. It was a perpetual premium to farmers to furnish unclean wheat, and to raise the most undesirable varieties. It was undermining the entire foreign trade. The value of a bushel of wheat was varied from two to ten cents, according to its weight, but the proper rules of inspection were in so many cases evaded that the difference is ignored, and the poorest wheat that would grade No. 2 determined the price of the whole grade. If a farmer were to offer a miller wheat weighing less than sixty pounds, the miller would refuse to buy it as No. 2; but a dealer buying for reshipment would pay the current price, knowing it would grade as No. 2 in Toledo, New York, or elsewhere. Foreigners have submitted, because they were compelled to, but now they are, in a large measure, independent of our supplies, and it is necessary that wheat should grade at its actual value, and become in value what its grade represents it to be, and not, as often the case, something entirely different.

Upon resuming the session at 1:30 P. M., the association proceeded immediately to permanent organization, by the election of Mr. Dunlap, of Franklin, president; Mr. Wilkinson, of Knightstown, vice-president; Mr. Richardson, of Indianapolis, treasurer, and Mr. Higgins, of Indianapolis, secretary. A board of managers was appointed, consisting of John Harrison, of Hendricks County; C. Girton, of Shelby County; W. H. Croucher, of Miami; B. F. Crabbs, of Montgomery; William Pratt, of Hancock, and James Sweetzer, of Grant.

Grain-dealers and millers were made available to membership, and articles of association adopted. The committee on weights and grades reported as follows:

Wheat weighing sixty pounds to the bushel, or by the grain tester, shall be considered standard. When wheat falls below this standard, buyers are requested to make the following discounts in price, which will make it equivalent, to-wit:

Wheat weighing 60 pounds..... 1c per bushel off.
Wheat weighing 58 pounds..... 3c per bushel off.
Wheat weighing 57 pounds..... 6c per bushel off.
Wheat weighing 56 pounds.....10c per bushel off.

And wheat falling below fifty-six pounds to be taken at the discretion of the buyer, and with damaged wheat to use their best judgment, with the advice to buy at a low figure, with a view to discouraging careless farming.

The report was adopted, as was also the one from the committee on the grain-sack nuisance, which read as follows:

"WHEREAS, It seems impossible to unite all the grain dealers in the matter of loaning grain sacks to farmers, and, as the practice is pernicious to the interests of the grain trade, the committee recommends each county or other organized locality to abolish the practice, and that every member of the association pledge himself to use all honorable means to bring about a total abandonment of the practice at the earliest times."

A good deal of miscellaneous discussion ensued, and it was ordered that another meeting be called for the first Tuesday in July, in Indianapolis, by which date something could be determined from the known quantity

and condition of the crops, which would begin to move about that time, after which the meeting adjourned.

The following gentlemen were enrolled as members:

O. Bernard & Co., Fowler, Ind.; Waring Studebaker, Bluffton, Ind.; Alfred Reed, Vincennes; Campbell & Martin, Attica; Isaac Ratliff, Amo; William Crim, Anderson; W. U. Coucher, Peru; J. A. Church, Knightstown; W. F. Pratt, Greenfield; F. Dickson, Whiteland; E. C. Elliott, Jackson, Tipton county; Walton & Whisler, Shielville; Fostram & Wallace. Kempton; William Lowden, Michigantown; Clark & Harrison, Clayton; J. C. Heller & Co., Elwood; Jacob Everly, Covington; O. W. Hill, Pittsboro; H. G. Harting, Elwood; Richardson & Evans, city; Jencks & Evans, Terre Haute; Amos Thornburg, Martinsville; H. L. Wethrall & Son, Connersville; Keller & Ude, Connersville, Richards & Butler, Liberty; T. G. Quick, Columbus; Sohn Nading, Flatrock; S. C. Smith & Bro., Fairland: E. H. Stanley & Means, Brookville; J. S. Jeffers, Shelbyville; C. R. Cooly & Son, Hartford City; William New, Greenfield; Crabbs & Co., Crawfordsville; McMakin & Davis, Crawfordsville; F. Hallowell, Crawfordsville; Busby & Son, Lebanon; Sweetser & Turner, Marion; J. W. Hill & Son, Jonesboro; Guirl & Palmer, Sheridan; Girton & Patterson, Shelbyville; Riley & Witt, Lebanon; I. McDaniel, Brooklyn; R. H. Branch, Martinsville; Charles B. Riley, Milroy; A. Hogen, Fortville; James Cahen, Alfonte; M. D. Carnahan, Loogootee; William Purbee & Son, Montpelier; Frank Baker, Shoals; Terre Haute Elevator Company, Terre Haute; McKeen Bros., Terre Haute; William Paddock & Co., Terre Haute; J. H. Strickler & Co., Boggstown; John J. Carriger, city; N. S. Mart, Greenwood; M. S. Blish, Seymour; Loughry Bros., Monticello; Wilkinson & Pedin, Knightstown; J. M. Dunlap, Franklin; R. C. Orwin, Brazil.

It was ordered that another meeting be convened on the first Tuesday in July, as it was the sense of those present that by that time enough would be known of the condition and quantity of the new crop to enable the association to take practicable measures for the management of the trade during the coming year.

Adjourned.

IMPROVEMENT OF THE MISSISSIPPI RIVER.

[Speech of the Hon. John J. O'Neill, of Missouri, in the House of Representatives, Wednesday, June 11, 1884.]

Mr. Chairman, in asking this House to increase the appropriation for the improvement of the Mississippi River between St. Louis and Cairo to $1,000,000, I am carrying out the desire of the engineers in charge of the work, who believe that this amount can be used to advantage during this year and who have recommended such an appropriation. I earnestly appeal to members for their attention, as I find a disposition prevailing to reject all amendments, no matter how meritorious or how necessary, and to pass this bill just as it has been reported from the committee; a disposition arising, I am certain, from the fear of the possible defeat of an excessive bill. They should, however, bear in mind that it is not the amount but the incorporation of improper features that brings river and harbor bills into disrepute.

The injudicious appropriation of money for unworthy objects by the last Congress brought a similar bill under general condemnation, of which fact our committee appears to have been conscious, for I see that all creeks and bogus rivers have been carefully eliminated from this bill. While this is commendable from an economic standpoint, are we not committing a greater wrong by going to the other extreme in refusing to make sufficient appropriations to insure the speedy completion of river improvemeuts now fairly inaugurated, and the early completion of which will afford such great benefits to our commercial interests in the saving of vast sums of money to our producers!

If this House were fully conscious of this and knew that the system which had been inaugurated is no longer an experiment, but has been demonstrated to be the true method for affording relief, and had in every instance resulted in permanently deepening the channel, in removing shoals and bars and in preventing caving banks, thereby affording every guarantee for an unvexed deep water way to the sea, I feel confident that a more liberal spirit would prevail and larger appropriations would be given, so that this work can be speedily completed, and that within a few years our people may be able to enjoy the benefits and blessings that will arise from it.

The commerce of the valley of the Mississippi River and its navigable tributaries, embracing over one and a half million square miles and comprising nearly 30,000,000 of our people, demands in the way of cheap transportation immediate relief to permit successful competition with the products of India, Russia, and South America in foreign markets.

The countries of Europe which do not produce sufficient wheat for home consumption are compelled to import 356,000,000 bushels. The countries of supply yield for export as follows:

	Bushels.
Russia	74,000,000
Other European countries	36,000,000
India	30,000,000
Other countries	47,000,000
Total	187,000,000

Leaving for the United States to supply 169,000,000 bushels.

Of corn, the countries importing require about 125,000,000 bushels, while those exporting supply only 56,000,000 bushels; leaving 69,000,000 to be supplied by the United States.

The production of grain in the Mississippi Valley in excess of the demands for home consumption has increased marvelously—the shipments from St. Louis alone to New Orleans having increased from 300,000 bushels in 1871 to nearly 12,000,000 bushels in 1883.

The cost of shipping grain by river in 1883 during the months of January and February, when navigation was almost suspended, was 25 cents per bushel, while in May and June when there was ample water in the channel, the cost fell to 16½ cents per bushel. The Mississippi Valley Transportation Company have barges that can carry 56,000 bushels and make the trip to New Orleans in six and a half days with a nine-foot stage of water, while with a five-foot stage they can only carry 20,000 bushels, and the trip requires about nineteen days. It is estimated that it costs 6 cents per bushel more to transport grain during low water, and that the rate of freight from St. Louis to New Orleans could be reduced to 4 cents per bushel, provided a stage of nine feet of water could be maintained in the river.

If we realize the enormous tribute that is annually levied on our producers in the cost of transportation, we cannot but appreciate the importance of improving our rivers and cheapening the cost of sending our grain to the sea, especially in view of the fact that we must compete against India where labor commands but 11 cents a day, and which last year produced 270,000,000 bushels of grain.

The next question to consider is the feasibility of improving the river so as to furnish a permanent deep-water channel to the Gulf, and I realize that many members are still under the impression that the work is experimental, that no permanent good results can be accomplished, and that all moneys so expended are squandered. If they vote for this bill it will be owing more to the presence in this bill of appropriations to be used in their own district than from the belief in the efficacy of river improvement. To such members I desire to submit a brief sketch of what has been thus far accomplished in that direction.

On the Upper Mississippi work has been carried on only at those points where navigation was most impeded, and has afforded substantial relief. The select committee from the Senate which visited the various points in the river reported the following increase in depth of channel at low water: From Saint Paul to Saint Croix River, formerly 15 inches, now 4½ feet; North Saint Croix River to Chippewa River, formerly 30 inches, now 6 to 9 feet. Bar 120 miles below Saint Paul, formerly 30 inches, now 6 feet. Bar above Winona, formerly 32 inches, now 6 feet. A long list of successful treatment of many bars, sloughs and crossings gives ample evidence that the money appropriated has been wisely expended.

Between Saint Louis and Cairo the work has been principally below the city, and so far only extends to Bushburg, 26 miles below the city, it being the policy of the commission to make the work continuous. The uniting of Arsenal Island with the Illinois shore has resulted in permanently deepening the channel sufficient for all needs of navigation. At Horsetail Bar, a few miles below Saint Louis, the channel was formerly narrow and tortuous, with a depth of but 3½ feet in low water; it is now direct and wide, with a depth of 8½ feet at low water.

The works below Cairo consist in seeking to increase the navigable depth at low water by narrowing the width at that stage to about 3,000 feet, it being found that where this width is exceeded bad navigation as a rule exists. Recourse is had to light permeable structures erected in the river bed and designed, by checking the velocity of the current, to induce deposits of sediments on those portions which it is proposed to reclaim from the river.

By this action it is expected that these deposits will ultimately be raised to the level of the normal banks. When this is done the river will have a nearly uniform width, and the tendency to form shoals in the wide places will be done away with, and at the same time the concentrated flow thus set up will scour down the bed, remove the shoals, and ultimately lower the flood-line.

To prevent the constant bank erosion now going on, both the old banks and the new ones, where exposed to this action, are protected by brush mattresses below the low-water line, and above that point by brush or stone or the natural vegetation.

The principle of contracting the water way to secure increased depth is in no sense experimental, but has been successfully carried out on many streams in this country and abroad.

The special methods proposed have also passed beyond the experimental stage; they have received practical tests at various points on the Mississippi and Missouri Rivers, and recent work done by the commission shows their correctness. They are only applicable to silt-bearing streams.

COTTON SEED AND ITS USES.

Prof. Myers, of the A. and M. College of Mississippi, delivered an address before the National Cotton Planters' Association at its annual meeting in November, 1883, at Vicksburg, Miss., on the "Uses and Products of Cotton Seed." The production of this seed, which is becoming more and more valuable for its commercial products, such as oil, etc., is almost limitless in amount, but only a fraction can be profitably marketed on account of the cost of transportation and the loss of seed in transit. Owing to this fact, at the present price of about eleven cents per bushel, only a strip of country in the cotton belt, twelve miles wide on either side of the line of transit, can profitably send the seed to market. As the demand increases, however, prices will, to some extent, go up. The seed is composed of 49.1 per cent. of hull; the balance kernel, or a nearly equal division. The hull contains 0.58 per cent. of oil, 38.67 per cent. of hydrocarbons, or fuel, and 2.19 per cent. nitrogenous or nutritive matter, besides some 19. sometimes 30 per cent. of potash, and 9.2 of phosphoric acid. The hulls do not, as yet, find a ready market, although there is some demand for them at the South, for cattle feed and litter or mulch. The kernel is composed of 36.55 per cent. of oil, 29.25 of proteine matter, 19.52 of carbohydrates, and 4.38 per cent. of fiber. Take the seed as a whole, there are of albuminoids 22.8, carbohydrates 15.4, fats 30.3, of fiber 16, and of ash 7.8 per cent.

The commercial value of this seed may be classified under three heads, viz.: As a fertilizer, the feed value, and the products obtained by manufacture. The Professor enters into a lengthy discussion of the great importance of the first class and the modes of so utilizing in the field. At $9 a ton it is, he says, the cheapest fertilizer in the market, and the meal at $20 stands next. But the latter is a by-product in oil milling, and is worth more than double the value of the seed. But this is the least important of these three classes. Next comes its feed value, and this is increasing with the improvement of manufacture, based on scientific knowledge and experiment, and also in utilizing properly the nutrition in feeding. Many elements of flavor, proportions, etc., enter into the latter problem, practically increasing or decreasing the worth of equal amounts of food. A comparison by tables, giving in full the elementary analyses of the articles compared on a ration for 1,000 pounds of live weight, places the relative value of cotton seed meal to corn fodder at 1:5.3: of straws and cow peas, 1:6.2: hay and oat straw, 1:5.3: Bermuda grass and turnips, 1:5. The first was for horses at hard work, the second at moderate work, and the third at saddle and light carriage work The fourth was for fattening cattle in the second period—a fair average of the general fattening comparisons.

By far the most important use, which is rapidly increasing, is the oil production. Exact returns are not, says the Professor, procurable. In the reports to the Cotton

and Seed Crushers' Association, which met at Chicago on June 26,1883,101 mills were returned as in operation. Their estimated work during the year then just closed was 554,000 tons of seed crushed, from which 16,175,830 gallons of crude oil were produced, five-sixths of which are supposed to have been consumed in this country, while 3,235,165 gallons were estimated as exported. The first cotton seed oil came to France from Egypt in 1852, since which time its use, in many well-known ways, replacing salad and more expensive olive oils, etc., has immensely increased, while it is pronounced by scientists one of the best and most wholesome of cooking oils, preferable in a large proportion of cases to lard. The great Chicago lard corner of McGeoch, and the civil suits that followed, relative to cotton seed oil adulteration, show how important a factor it has become in the oil market. The use of this oil in soap production is also a growingly important matter. In summing up the market prices, the author puts the commercial value at minimum figures of a ton of cotton seed, oil, 35 gallons at $10.50, twenty pounds of lint $1, 750 pounds of meal $7.50, with the hull, ashes, etc, $1, aggregating $20, and making a profit on the average cost of seed at $13 of $6.50 per ton, is generally much more.

"CORNERS" AND "SYNDICATES."

Very few persons, at the present time, but have heard of "corners" and "syndicates," and a majority have a very good idea what those words mean. It is, however, only lately that they have come into general use. Corners have become very popular lately, even attempts at cornering graveyards are reported. Corners are not always successful, however; at least, a correspondent tells us of an attempt that proved the downfall of a well to do farmer. We give the facts to our readers as the "well-to-do" gave it to our corrrespondent: "You think I look financially demoralized, do you? Well, you are right. You see, I found out that most of the cats throughout the West were sick, and all the indications pointed to a further spread of the sickness. I sold my farm and with the money bought all the catnip I could, and held it for a rise; in fact, I 'cornered' sick cats or catnip—which one you please." "Didn't the cats get sick?" asked our correspondent. "Yes; but they concluded to let the *cats nip* something else, and that something else is what *nipped* me, for my stock soured on my hands, and I 'busted'."

We started out with the intention to give the origin of corners and syndicates, but have wandered from the subject. The word "corner" is probably of Latin origin. It suggests *cornu*, a horn—a thing which terminates in an angle, where is a secret and retired place. The phrase "To make a corner," however, is one of purely American origin, and it is suggestive enough. It implies the concentrating of some object into a limited area, from which there shall be but one egress, of which the cornerers hold the key. It suggests something like the gathering of a Highland sheep farm, where the animals are irresistibly driven in from widely distributed spots to one small "fank." It suggests the bag or drawer of the thrifty housewife, into which is gathered all actually or potentially useful articles. It suggests the commonplace book of the wide-reading and much-writing journalist. It suggests also the old teapot, the lucky stocking, and the savings bank.

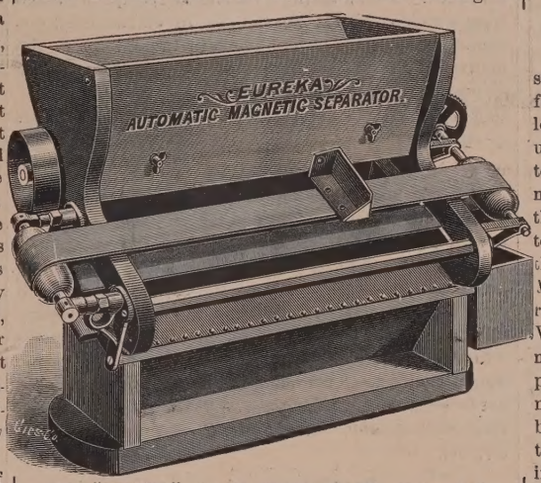
The modern phrase "syndicate" is of Latin origin, and was not unknown in Old World commerce. Then it meant the combination of a number of merchants for the consummation of a venture beyond the means or the inclination of any one of them. The Dutch merchants were fond of forming syndicates for large trading purposes; and the East India Company, Hudson Bay Company. and many other concerns which have now attained the dimensions and the dignity of public corporations, had a similar origin. The syndicate system had in it the germ of the joint stock company system; but although each member subscribed a certain amount, which he would advance, or for which he would be liable, his liability could not always be restricted thereto. The uncertainty in this respect evolved the limited liability principle now so common. But the syndicates of to-day are of somewhat different character; they are usually combinations of capitalists to bring about changes in the markets for commodities or stocks for a specific purpose. In this manner they are the parents of "corners."—*N. Y. Mercantile Journal.*

Colorado has to buy $2,000,000 worth of grain every year for cattle feed.

A CURIOUS GRAIN-CLEANING MACHINE.

The use of magnetic machines as grain cleaners has an interesting history. Some years ago, after repeated trials, the wire-binder at achment to reapers was finally successful, and the rapidity with which it was adopted all over the wheat-growing sections of the country was astonishing. While of immense advantage to the farmer, relieving him and his family of depending so largely on "tramp" labor in the busiest period of the year, the miller found that the use of wire to bind the sheaves was not a desirable thing for him and his machinery. Even with the utmost care on the part of the threshers, pieces of wire would mingle with the grain and reach the mill. No cleaning machinery in use would remove all of it; and its passage through the burrs flattened the wire, injured the stone, and sent the wire to the bolts with sharp edges that cut the cloth, ruining the bolts in a short time. The career of this wire did not end here. The writer found a flattened, sword-like piece of wire, nearly an inch long, in a bi cuit, and this experience has often been duplicated by others.

Millers attempted to discriminate against wire-bound wheat, but the attempt was abortive, from the fact that the presence of wire could not be detected in the grain, at least not until after it was in the mill and running on



THE "EUREKA" AUTOMATIC MAGNETIC SEPARATOR.

the machinery, when some of the larger pieces would tail over the separator. It was useless to expect farmers to forego the advantages arising from the use of the wire-binder, and the nature of the trouble to contend against was so unlike anything the miller's cleaning machinery had been devised for, that the difficulty seemed insurmountable. Then some one suggested magnets.

It did not take long to demonstrate that the magnet was the proper instrumentality to fight the wire. And the magnet revealed something else; that wheat containing no wire did contain plenty of other iron particles, such as nails, tacks, screws, and an infinite variety of similar articles, whose presence in the wheat the magnet revealed. So the use of the magnet has become common in flour mills, being looked upon wherever used as an indispensable part of the grain-cleaning machinery.

We give on this page an illustration of the Eureka Automatic Magnetic Separator, which has now been upon the market for over four years, and of which a large number are in use. The operation of the machine is as follows: The grain is fed into the hopper, and by the feed roll is distributed evenly the entire length of the machine. It first falls on heavy zinc, which, being a non-conductor of magnetism, particles of iron, intermixed with grain, flow together until they reach the magnetized sheet-iron, where the iron particles are held until removed by the wiper attached to an endless belt, which passes over it once a minute, depositing them in a box at the end of the machine.

It will be seen that the machine is entirely simple and automatic, which is one of its most valuable features, as the machine thus requires no attention. The magnets are made of the best quality of magnet steel, and are charged under the supervision of the makers of the machine. The sheet-iron placed on the poles of the magnets not only makes a strong magnetic field for arresting the iron particles, but also serves as an armature for the magnets, preserving the strength of the magnets for an indefinite time. The machine is made in five sizes, suitable for mills of varying capacities, and the prices have lately been very materially reduced. The manufacturers are Messrs. Howes & Ewell, of Silver Creek, N. Y., makers of the well-known Eureka Machines; and they will give any particulars desired respecting the work of the machines, prices, etc.

THE CALIFORNIA WHEAT CROP.

Mr. Ed. F. Smith, Secretary of the California State Board of Agriculture, has published his estimates of the present wheat crop of that state based on the returns from its six leading wheat counties made, before the June rains. The condition of the crop in these counties, varying from 108 to 140, averaged over 116. In the "bonanza" year, 1880-'81, their total acreage was 1,213,884, yielding 21,450,245 bushels, which, as estimated, was 44 per cent. of the entire crop, reported officially at 48,805,794 bushels. The increased acreage in these six counties this year over that harvested in 1881, is calculated from all the data secured, at 235,648, and the aggregate of wheat at a probable average of 15 per cent. higher, will be 24,667,781 bushels, which is regarded, says the report, as a very moderate estimate. Adding to this the 56 per cent. for the rest of the state, and the entire aggregate of the crop thus estimated, will be 56,000,000 bushels.

CORN.

The Miller, London, Eng., is giving serially the substance of of M. De Candolle's "History of the Cereals" from recent researches, from which we take the following: „When America was discovered, maize was a universal agricultural product, from the LaPlata to the territory now occupied by the United States, and had a name in all the native dialects. The ancient mounds of the period preceding the Aztecs, and the tombs and temples of the Incas of Peru contain cobs of corn, as do the Egyptian tombs grains of barley and wheat. In Mexico a goddess, bearing a name derived from maize, received the first ears gathered; and at Cusco the Sun-Virgins made bread of this grain for sacrifice. This does not show an antiquity equal to that of the Old World, probably not earlier than our era. Darwin found a maize cob and eighteen modern varieties of shells, buried in a beach at Peru, raised eighty-five feet above the sea level. Still botanists have not discovered corn in the wild state in America. St. Hilaire thought that he had discovered the parent type in a curious species, known at Buenos Ayres as *Pinsigallo;* each kernel is incased in a separate sheath; it is called *Zoa Mays, tunicata* or *cryptosperma.* Lindley describes a similar variety as coming from the Rocky Mountains, but this source has not been confirmed. A young Paraguayan said he recognized it and that it grew in the damp forest lands of Paraguay; but no traveler is known to have found it there. When this has been cultivated in Europe, it has constantly passed into the common type. Lindley proved this and it is therefore only another variety.

We know little of the conditions of corn-growing before the Spanish Conquest; but, says M. Candolle, this cereal is singularly wanting in means of self-protection and dissemination. The grains are difficult to detach and offer no means for the action of the wind; when the stalk falls to the ground the adherent grain remains subject to rodents, etc. It was doubtless saved and disseminated by nomad tribes. Science may yet discover that several analogous types of Zoas have existed; but the present one is a monotype, occupying only an isolated position in its own family of plants. There has been found a single species by Schraeder, *Euchlaena*, in Guatemala, and perhaps another specimen in Mexico; but it is a genus by itself, with no transitions to zoa. Mr. Wittmarck found several different varieties of maize, comparing the North and South American products, but these tombs are not more ancient, probably, than the discovery of the continent. All, however, admit that there are a large number of varieties, thus indicating a much greater antiquity.

Reasoning on the habitat of the primitive type of maize, the writer remarks that dense populations only accumulate in regions where food is easy to raise; and it is probable that maize was found wild in the altitudes of Peru and Chili, where this density was found by the discoverers of America. We must not look for it in the low damp forest regions, not suited to annual plants. The rapid and wide dissemination is thus also more easily accounted for. It is true that at that time the Mexicans and

Peruvians had no apparent knowledge of one another; and though this may have been different at some previous period, it is probable that they had different points of origin, or one immediately between them, such as New Grenada. The facts as to the race of husbandmen, occupying at that time the plateau of Bogota, confirms this latter view. This race came in contact with their neighbors on the south, and also the warlike nations of Central America. M. Candolle says that he does not expect that maize will ever be discovered wild; and its origin, etc., must be made clear by archæological research.

WHEAT.

Wheat is supposed to have come originally from Asia, north of the Himalaya Mountains, where it grew wild. Corn comes from South America. Wheat was first grown on the American continent by a slave of Cortez in Mexico. The James River settlers, under instructions of the Indians, began to raise corn in 1608. Samples of wheat were sent to Europe from the Dutch colony of New Netherlands as early as 1626. As early as 1630 "rye and Indian" bread was becoming fashionable, and oats and barley were cultivated as soon as rye. The growth in the grain area has been almost unbroken, and at a very early day the colonists had a surplus for export. From 1870 to 1880 there was a very rapid increase in the grain production until in the latter year it reached 2,718,193,501 bushels. In 1881 it fell off no less than 650,000,090 bushels. For 1882 it is now anticipated the total crop will be the largest ever grown. New England, the South and the Middle states do not produce enough wheat to supply their own wants, but the South is rapidly inceeasing her acreage of both wheat and corn. The export trade in grain has been a regular and important business since 1821. Prior to that it was spasmodic and intermittent. Often, as late as 1837, the home wheat crop was not equal to the consumption and imports were made from Europe.

WHEAT GRADING.

The number of grades of wheat differ with the circumstances of the market as to the number of varieties handled. In California, where winter wheat alone is sold, the grades are only three. In the Eastern markets, where winter and spring, white and red, are handled, the grades run to six or eight, to even a "dozen," besides the ungraded. A writer in the *Milling World* is treating, in a series of papers, the "Varieties of Wheat." There is a considerable variety in the specific weight, he says, of different varieties. It should be noted, however, as an element of error, that there is a difference of a fraction over 67 cubic inches in favor of the English imperial bushel compared with the Winchester bushel, which is in general use in this country, so that wheat weighing sixty pounds per the latter bushel would weigh a fraction over sixty-one by the imperial measure. The actual weights of different wheats range from fifty-four to sixty-five pounds, but when the weight of a bushel falls below fifty-seven pounds the quality is decidedly inferior; when it is sixty-one it is considered exceptionally good, while sixty-three and above, is very rare. The weight in this country, by law and custom, is sixty pounds.

Analyses of various wheats show considerable differences in the ratios of the elements. The gluten in fifty-seven samples examined ran from 8.4 to 14.5 per cent., varying as much as three per cent. in the same varieties. In a comparison of winter and spring wheats, the latter average about 1.3 per cent. more albuminoids than the winter wheat; the range is also greater in the spring wheats, being from 8.1 in the poorer to 15.5 per cent. in the best; these variations occur not only in different varieties but in the same variety in different seasons and localities. The size, plumpness, and average weight of the kernels also are subject to great variations, ranging, as tabulated by the author, from 7,443 to 16,199 grains per pound.

Davy found, many years ago, that the wheats of Sicily were richer in gluten than those of England, which led to the hasty generalization that the wheats of warm climates were stronger than those of the cooler ones. The tests of American wheats do not sustain this view. The wheats of California, or of the Southern states, are not richer than those of the North.

Legal Notes.

Lien on Cargo.

In order that a ship-owner may retain a lien on the cargo for freight, it should not be delivered to the consignee. This rule is not absolute, but in the case of an understanding between the parties that the lien may remain, the cargo may be delivered.—*Wilcox vs.* 500 *tons of coal, United States Circuit Court, Northern District of Illinois—in Admiralty.*

Lien for Freight.

A common carrier of freight has a lien upon each shipment so long as it remains in its possession for the charges thereon, but it cannot refuse to receive freight because back charges for other shipments have not been paid, nor can it, by mere notice to the shipper, acquire a lien on a shipment about to be made for such back charges.—*Eastern Ky. R. R. Co. vs. Holbrook, Supreme Court of Kentucky.*

Fraud—Warehouse Receipt.

The law does not allow a purchaser to shut his eyes in the face of well-grounded suspicion. But fraud in a sale must be established by legitimate inferences and can not be inferred from the mere fact that the seller is embarrassed. A bank taking a warehouse receipt in pledge from a trader whom it knows to be in embarrassed circumstances is not therefore bound to inquire as to the motives of the pledgor in making the pledge, nor to the disposition that he intends to make of his property.—*Gaff et al. vs. Fourth National Bank, St. Louis Court of Appeals.*

Freight Contracts.

A carrier undertook to transport goods from Zanesville, Ohio, to Denver, Col., and the shipper paid on it the through freight. To complete the carriage the goods were transferred to another and connecting road, which set up a lien for freight beyond the sum received by it from the first carrier. *Held*, that the second company was the agent of the first carrier, and it took the goods with the knowledge that the contract was made for the transportation to Denver, and the lien for freight could not be set up against the goods.—*Marsh vs. Union Pacific Railroad Company, United States Circuit Court at Denver, Col.*

Declarations of Agent.

It is the general rule that where the acts of the agent will bind his principal, there his representations and declarations respecting the subject matter will also bind him, if made at the same time, and constituting a part of the transactions in issue. But a declaration in a letter by an agent, who was also a guarantor upon notes of the principal, respecting the payment of the notes, even if the language can be construed into a threat to fraudulently conceal property so as to hinder creditors, can not be regarded as within the scope of the agent's authority, and do not bind the principal.—*Bernstein vs. Bernstein, Appellate Court of Illinois.*

Insurance and Common Carrier.

In a suit to recover from the insurance company the value of goods lost on a railroad, the policy stipulated that the insurer should be subrogated to all claims against the transporter. The bill of lading provided that the carrier should have the benefit of any insurance on the goods. *Held*, that a carrier, though he may not escape liability, may insure himself against it, and may also contract for the benefit of the insurance made by the shipper. Also, that the agreement in the bill of lading prevented the shipper from subrogating the insurer to his claims according to the policy, and there could be no recovery from the insurer.—*Carstairs, McCall & Co. vs. the Mech. and Traders' Ins. Co., U. S. Circuit Court for Maryland.*

The Title Acquired by Warehouse Receipts.

An interesting point was recently decided by Judge Blodgett, in the case of O'Donohue against Manierre and others. In December, 1882, O'Donohue consigned 500 bags of coffee to F. V. Conners & Co., for sale, and it was placed in Manierre's warehouse. A warehouse receipt was issued and Conners pledged it to McGeogh, Everingham & Co., to secure them on some speculation in which he was engaged on the Board of Trade. As soon as O'Donohue heard of this transaction he began a replevin suit to recover the coffee. The defendants claimed the title to the property passed to them by the transfer of the warehouse receipt, but Judge Blodgett held that McGeogh, Everingham & Co. only took what ever interest Conners had in the coffee, and, as he had no interest, they got none. That was the rule at common law, and it had been carefully limited and defined by statutes and decisions. No demand was necessary, but the owner could at once bring suit, and he was entitled to a judgment for the return of the property.

Marine Insurance.

A policy of marine insurance which contained a stipulation that in case of loss or misfortune the insurer would contribute ratably to expenses incurred by the assured or their agents in and about the recovery of the insured cargo, was issued by a corporation of the state of Connecticut, also doing business in the state of Ohio. The cargo was sunk in waters of the state of Michigan, and labor was expended in efforts to recover it. Held, that the breach of such stipulation on the part of the insurer constitutes a cause of action against the company, cognizable by the laws of this state.—*Handy et. al. vs. Ætna Insurance Company, Supreme Court of Ohio.*

Insurance Money.

Creditors of a firm whose stock of goods was destroyed by fire attached the insurance money in the hands of the insurance companies. No proofs of loss had been made. *Held*, that these claims for the insurance money were contingent and could not be reached by attachment. There was no indebtedness from the insurance companies concerned in this loss, or who had policies on this stock, until the proofs of loss were made. This was a condition precedent which had not been complied with. Whether it ever would be complied with or not was a contingency.—*Lovejoy et al. vs Hartford Fire Insurance Company, United States Circuit Court at Chicago, Illinois.*

Common Carrier.

Common carriers can not insist upon unusual or unreasonable conditions before receiving freight. A condition that goods carried shall be liable for "arrearages of freight due on other goods of the same consignee or owner," is not unreasonable where the consignee is actually indebted for such arrearages. The fact that one has been in the habit of shipping goods under such conditions does not in itself make goods shipped to him under similar receipts liable for arrearages. Where a consignor has no special authority to make such an agreement, a consignee who has not himself assented to it is not bound.—*Kirkman vs. Philadelphia & Reading Railroad Company.*

Shipping—Advances by Part Owner.

Part owners of a vessel claimed a lien for advances made in defending and compromising an action brought by the mate for his wages, and for certain other advances. In this case, Load vs. Loring, in the United States Circuit Court for the District of Massachusetts, Judge Lowell, in deciding against the claim, said: "The courts of New York and Kentucky have decided that there is a lien for such advances; the English courts have overruled this claim; but in this circuit two Judges of the Supreme Court of the United States have said that a part owner has no lien or right of priority in equity upon the ship itself for a balance of account which may be due him, and I feel bound to follow their opinion until a more deliberate and solemn decision shall show that they are mistaken."

MILWAUKEE'S GRAIN TRADE.

Wm. J. Langson, Secretary of the Milwaukee Chamber of Commerce, issued, on June 19, the Twenty-sixth Annual Report of the trade and commerce of that city for the year 1883, and of the Chamber for the fiscal year ended April 7, 1884, which makes a very handsome volume, giving a complete record of the commerce, manufactures, and general business of that city. These were all evidently affected by the general business depression of this period, and present no exception to the general rule. Still, Milwaukee has been, says the report, exceptionally exempt from disastrous failures, and has "enjoyed an unsurpassed reputation throughout the commercial world." The statistics of the grain trade show an increase of the aggregate receipts of about 3,500,000 bushels, and strengthens the opinion there expressed that she had reached a lower point in 1882 than is likely to occur again. The movement of wheat showed the first increase for four years, while the quality and condition of the crop were better than in the preceding years. The total receipts of wheat were 9,278,922, and

of all grain 21,892,332 bushels. Barley has become a marked feature of this market, showing a total of about 7,000,000 bushels, one-third being consumed by local brewers; this is now the leading barley market west of New York, the large reported receipts of Chicago include over 3,000,000 bushels of Milwaukee shipments East and South by rail.

A comparative statement of the Milwaukee grain receipts for three years shows a total of nearly 21,900,000 bushels in 1883, against 18,300,000 in 1882, and some 3,000,000 more in 1881. The figures for wheat were about 9,280,000 in 1883; in 1882 about 8,960,000, and some 10,200,000 in 1881. The increase was mainly in barley, the receipts of 1883 being more than 2,300,000 bushels greater than those of 1881. The receipts of flour, reduced to wheat, differed by less than 100,000 bushels from 15,100,000 in each of these years, being slightly the largest in 1881. While Minneapolis, says the report, will take all the wheat of the Upper Mississippi section, and Duluth of the Northern Pacific Road, a large and increasing section is being opened to Milwaukee by the construction of new railways for over 700 miles west; and there is a vast rich agricultural territory to and beyond the Missouri that will naturally contribute its products to this port.

The milling business of Milwaukee, says the Secretary, gives signs of being over-done. The movement of flour in 1883 fell a little short of that of the previous year, and the output of the mills was not more than 40 per cent. of their total capacity; this was due to the unsatisfactory condition of the markets for breadstuffs. But as the water power of Minneapolis, from tillage and settlement, is becoming impaired, and a decline taking place in the yield and quality of Minnesota wheat, her future control of the milling interests are not assured, while Milwaukee and other competing points may eventually obtain a larger share in this industry.

AN IMPORTANT DECISION BY THE UNITED STATES COURT.

A case of great interest and importance to millers and grain dealers has recently been decided by the Supreme Court of the United States, deciding, as it does, questions that often arise in the course of their business. The case arose out of the partnership affairs of Irwin & Davis, who were millers and grain dealers at Brazil, Ind. The facts were these: Irwin & Davis became partners in 1872, the purpose of the partnership being the operation of a mill and the buying of wheat and corn for manufacture into flour, and the sale of such grain as might accumulate in excess of the needs of the mill. The capacity of the mill did not exceed sixty barrels a day, and it usually produced only thirty. The capital of the firm was about four thousand dollars. The letter head used by the firm was as follows:

"Brazil Flouring Mill."
IRWIN & DAVIS,
Millers and Grain Dealers,
Brazil, Ind.

Davis resided at Brazil and conducted the business. Irwin resided at Butler, Pa., and took no part in the practical conduct of the business, but the evidence showed that he knew of the letter heads used by the firm. Davis had been in the habit of shipping grain to Baltimore, to Williar & Co., on consignment, no one shipment exceeding $1,000 in value, but had, prior to 1877, dealt in no futures or made any contracts to buy or sell on the Exchange. In 1877 Davis gave orders, by means of cipher telegrams to Williar & Co., for sale of wheat aggregating in all $251,794.84. Upon these transactions there was a loss amounting to $17,217, which Williar & Co., as brokers, had to pay, and Davis having died, they sued Irwin as surviving partner, claiming that these transactions upon which losses accrued were firm transactions. Williar claimed that Irwin, knowing of the letter heads, and permitting Davis to hold the firm out as grain dealers, he was liable to third parties who dealt on his credit. Irwin insisted that the deals of Davis were beyond the scope of the partnership, and made without his knowledge. The Court held that Irwin was not liable, and that the term "grain dealers" must be understood with reference to the place where the business was transacted. That from the nature of the mill, business, capital and location of Irwin & Davis, the buying or selling of futures to the amount of $250,000 was not necessarily within the scope of their partnership, and persons dealing with them were bound to take all these circumstances into consideration in determining whether one partner when acting without the actual knowledge of his other partners was carrying out the general purpose and scope of the firm, or not.

The settlement of the contracts made by Williar & Co. for Irwin & Davis, on the Exchange in Baltimore, had been made by forming what is called a "ring," that is, that when it so occurs as that one commission merchant, who, upon the order of one customer, has sold to another commission merchant grain for a certain future delivery, and afterward, upon the order of another customer, buys a like amount of like grain for the same future delivery from the same commission merchant, the two commission merchants set off the one contract as against the other, and make no actual tender or delivery of grain to each other, but return margins, and thus settle the trade. The court held that such a delivery and settlement of a contract is not binding on the customer unless he knows of it and consents to it; and the mere fact that he knows that such are the rules of the Exchange upon which he deals, through brokers, does not imply an assent to such a mode of settlement or delivery.

The case is of great importance, as it is decided by the highest court in the land, and very clearly settles questions which have often been mooted.—*From the American Miller.*

ELEVATORS AND FLAT WAREHOUSES IN CANADA.

Ta construct a flat warehouse capable of storing 10,000 bushels of wheat, and allow room for fanning mills and other hand cleaning arrangements, would not cost, at present low prices of lumber, more than $4,500. An elevator of the same capacity, with hopper-bottomed bins, would not cost over $2,500 more, that is, without cleaning machinery. A first-class separator can be had for $750; a six-horse power engine and boiler for $500; two fanning mills for $100; shafting, belting, cups and all the other cleaning arrangements necessary would not cost $1,000 fitted up and running; or, in short, the cost of the elevator complete would be a little less than double that of the flat warehouse. Now, let us see what each institution can accomplish, and at what figures it can do the work. In a flat warehouse each fanning mill requires at least three men to work at shoveling and driving, and a car-load of 500 bushels cleaned and loaded is a good day's work for such a gang. Taking three men at $2 a day, it takes $6 to clean and load every car of wheat handled, and an institution of the cost we have stated would not allow space for more than three gangs to work. Thus, a $4,500 flat warehouse could only clean and load three cars of wheat a day, and that at an expense of $18. Now, an elevator, such as we have described, can, withaut any pressure, clean and load a car of wheat in from forty to fifty minutes, or at least twelve cars a day, and that at about an expense of about $1 for fuel, and a man's wages, say $2, in all $3, or just half what the loading of each car will cost in a flat warehouse. This does not include weigher's book-keeper's, buyer's or car-trimmer's wages, but these are not included in the flat warehouse estimate either. To clean and load as much in a flat warehouse as an elevator will do in one day, and at a cost of $3, an outlay of $72 would be necessary, leaving a difference of $69. If, therefore, both institutions were pushed to their capacity for sixty-five days, the elevator would save the difference between its own cost and that of a flat warehouse. In that case the flat warehouse would prove rather an inverted economy.

If we estimate the total wheat crop of the Northwest, for 1884, at 9,000,000 bushels, which is not too high an estimate, it would cost about $108,000 to handle the same in flat warehouses, while in elevators it could be handled for $4,500, a net saving of $103,500, or enough in one year to construct and fit out about twelve elevators of 10,000 bushels capacity. Twelve such elevators springing up every year would certainly be a hot-house growth, as the *Sun* talks about, but a growth that would not cost the farmer a cent, and save him many an hour's delay in marketing his grain. Yet, all this is accomplished on a little over one cent a bushel, saving in the cost of handling the farmer's wheat.

At present many people are crying out for flat warehouses along the C. P. R. track, believing that a saving of outlay means economy. It will be found that such persons are, as a rule, totally ignorant of what grain handling is, and in no way can they better air their ignorance. The managers of the C. P. R., no doubt, calculated wildly in fixing the minimum capacity of the elevators along their lines, and placed them much too high, but they are right in principle in not allowing on their track any of those overgrown dry goods boxes of flat warehouses, which are only monuments of shiftlessness, and which, with other antediluvian institutions, have aided in making Eastern Canada a by-word in all progressive parts of the American continent.—*Winnipeg Commercial.*

A MISTAKEN IDEA.

The fact is generally taken for granted that wheat culture, like the treand of empire, is westward; and that the decline in this production in the Eastern states, as compared with those of the West, is absolute. The *New York Produce Exchange Reporter* presents in tabulated form the percentages of the wheat acreage of the whole country, divided into seven sections, in the years 1875 and 1883, compared. The respective increase in these states as given is as follows: New England, six states 33⅓ per cent.; Middle, four, 40; Western, east of Mississippi, five, 47; Western, west of Mississippi, six, 86; territories, west of Mississippi, nine, 1,000 per cent.; Pacific states, two, 50; and Southern, fourteen, a decrease of 524,830 acres, or about 11.7 per cent. The figures looked at above, seem to prove the statement made beyond dispute; but an analysis will show a different result. The increase in the Eastern, Middle or older states is a ratio in general based on the already cultivated soil; of the Western states this ratio is very largely based on new lands brought under cultivation; and in the new territory where 1,000 per cent. appears, that is almost entirely the case. The wheat product of the South, naturally has and will decline; but if these figures are studied in reference to the above statement it will be seen that proportionately to the arable lands under plow, these old states are holding on well to their proportion of wheat growing; while even sturdy New England shows that wheat is not there neglected. This does not bring out a comparison of yields; while the inducements to send out manufactured, in place of raw products, have their strongest influence on the older states nearer the seaboard.

ELEVATORS IN CANADA.

The introduction of the American system of country grain elevators in Canada is a subject that has engaged the attention of grain men here for some time past, and the opinion seems to obtain that such a plan would work well in this country, and greatly facilitate business. In the working of the above system, the railway company gives the land for the erection of an elevator or elevators, the minimum capacity of each being 20,000 bushels. Each elevator has a licensed warehouseman and an inspector of grain, and sometimes both positions are combined in one, the inspector acting under instructions from the corporate bodies governing the grain trade of the country. It is also made compulsory that all grain pass through the elevator before being shipped. By this means a uniformity of grade is established at interior points, thereby expediting business to a great extent, and it is the opinion of some of our leading grain men that it would amply repay the outlay of capital required for the carrying out of such a scheme. Its advantages over the present system are many, and its advocates believe that it will soon be introduced by all the railroads of Canada. It affords producers fair play by grading the grain, and thus insuring its being sold upon its merits while on the other hand it facilitates the transaction of business, as orders for certain grades of grain can then be filled in the country with much greater satisfaction to the purchaser, a regular warehouse certificate of the grain shipped being a guarantee of quality.

ENGLISH FARMING AND CEREAL PRODUCTION.

A cosrespondent of the *Farmer's Tribune*, Minneapolis, Minn., from the farms of old England sketches an interesting interview with a thrifty tenant of the Duke of Rutland. This man rents 600 acres, at a rental, with taxes, of ten dollars an acre, the land being valued at from $400 to $500, which makes his payment about two per cent. of its value. The farmer said that it did not pay to raise wheat since American grain had been selling in the Liverpool market at $1.25 per bushel, and English farmers found themselves unable to compete in raising it. The crops raised by this gentleman were hay, oats, turnips and cabbages. The first brings $18 per ton; and oats 95 cents per bushel with an average yield of forty-five

bushels per acre. Should American oats come to Liverpool for 75 cents per bushel, he said, he should stop raising them. Meanwhile, this producer feeds his own horses with American corn, which he buys at a dollar a bushel and as feed is worth two bushels of oats. This practice, however, he said was not common among English farmers, who are slow to learn; but after awhile the secret will out. The nobility, such as the Duke of Devonshire, have been feeding American corn to their sheep, deer and horses, for two years past, and corn is increasing in popularity in England. This farmer had gotten $1.40 for his wheat last year from a local miller who was not posted as to the price of American wheat. His laborers, he said, had been paid $16 a month in the summer, they feeding and housing themselves, and $2.50 per week extra in harvest, out of which, he thought, after paying rent and for food for their families, they could lay up $4 per month; but as a rule they saved nothing. They live better than formerly and have meat every day, buying American bacon, etc. All the produce of this man's farm, which seems a general rule, is consumed in the villages round about, and he thought that there was not a pound of English flour or bacon in either Liverpool or London.

WHEAT-GROWING IN KANSAS.

The *Kansas Farmer*, from the stand-point of the producer, presents some very sensible suggestions, pro and con, as to the present and future profits in wheat raising. The writer thinks that with the larger reserves from our former magnificent crop, and the increase in the market of the Indian product, that proved to be a good marketable article, with the augmented supplies from Australia, Russia, etc., the recently low ruling of prices was to be expected. While Russia, Australia and Canada produce first-class wheat, that of the tropics is proverbially inferior and the day of profitable wheat-growing for export in the Southern states has already passed. These warmer latitudes have a larger variety of agricultural products to choose from, and will naturally at length choose the most profitable ones. The cooler climate, however, can always raise good wheat, and its future production is measurably secure in such states as Kansas., etc. But low as 25 to 30 cents per bushel seems for transportation to the seaboard, it is a very heavy percentage of the value of the grain, and the practical question is, Cannot fruits or other products be more profitably cultivated? Many Kansas farmers have already so reasoned, and are now only growing wheat enough for domestic use.

SOME GRAIN STATISTICS.

In reply to inquiries made by the United States Senate, Mr. Dodge, statistician of the agricultural department, presents some valuable and interesting data. The general average yield of our corn is placed at 26 bushels per acre; of wheat at 12 bushels, and of rye 13.3. New England has presented the special phenomenon, the result of careful culture and rich manuring—of a yield of 100 bushels of corn per acre. The average production of corn for the five years 1877—81 inclusive, was 1,479,545,800, and the average consumption 1,397,016,200, showing an export of corn and corn meal of only 5.6 per cent. of the crop. Until recently 3 per cent. was the maximum exported, and less than one third of the total wheat crop was sent away. Mr. Dodge does not believe that these facts show that foreign market prices control ours; they are only a factor. Under low prices and a large crop, the tenth census reported an export of corn amounting to seventy times that exported in another year compared. Our domestic demands and conditions are the important price factors.

While the increase of population, through immigration as well as natural causes, has been unprecedented, the production of wheat has doubled its ratio in the last thirty years, and we are now exporting 33 per cent. of this total. A half century ago cotton represented one-half our agricultural exports; and, though vastly increased, it now is only one of the total. Our exports of breadstuffs, then, were 16.8 per cent. of these exports. But they have immensely increased, though not definitely stated—and more than $4,000,000,000 have been received since 1865 from foreign countries for our surplus breadstuffs and animal products. Mr. Dodge urges, however, as the true sound economic principle, that in all ways and by all methods of improved and increased machinery we increase our exports of manufactured products, turning the raw material into a value much enhanced, and handled at much less freight rates and smaller and less costly facilities.

AGRICULTURE IN NEW ZEALAND.

The San Francisco correspondent of *Bradstreet's* communicates the purport of an address recently of the bonanza wheat farmer, Mr. Firth, at Matamata, New Zealand. Besides a large amount of other products, he had harvestsd thousands of tons of wheat, using the best machinery for this work, brought from the United States, and steam plows from England, employing a force of sixty-five white laborers, economizing in these respects, as is claimed, to the utmost. But his announcement was, as the result of his year's operations, that with the low market prices he should be obliged to stop and discharge his hands. This, added to the stated fact sheep raising has ceased to be profitable there, is a startling and disheartening consideration for the New Zealand colonists. The average yield of wheat at Matamata is estimated at thirty-five bushels per acre, and Mr. Firth was asked to what this result was due. In reply he stated that the short hours of work, eight per day, and the high wages paid, $1.50 and board per day, was the cause, although the workmen, he said, were faithful and reliable. *Bradstreet's* remarked that this statement is liable to a considerable qualification. Labor-saving machinery, for successful application, must be handled by thoroughly competent men, with special knowledge and skill; and the failure of profits on such yields as above would be a mystery to the American farmer. The above stated high wages, etc., are probably paid only during short periods of work pressure, and to a comparatively few hands, while a rumor of such an Eldorado would cause a large ingress of competing, enterprising workmen, for on the whole only such could get there. It seems probable that these figures and reasonings need revision. At all events, one would like to hear the results if an American Dalrymple were in the New Zealand fields.

THE WHEAT FIELDS OF THE CANADIAN NORTHWEST.

A correspondent of the *Miller's Gazette*, London, Eng., writing from Moosejaw, Manitoba, says that the proportion of wheat being sown in the Canadian Northwest, as compared with oats, has largely increased on account of the relative low price of the latter. The wheat sown is the pure Red Scotch Fife, which the Northern Pacific R. R. Co. have taken great pains to freely disseminate. This company have a number of experimental farms located in this Western region, from the above point to Calazary. Should these prove successful, a strip of new wheat territory, 400 miles in length, it is said, will be opened in this as yet untried Western field for hard wheat production. A large territory in Southern Manitoba is still untouched, capable, it is claimed, of successfully growing the best of hard wheat. The Dominion Government has lately thrown upon the market a large amount of lands that have been hitherto reserved. The Winnipeg statisticians estimate the total crop of Manitoba and the Northwest territory at 9,000,000 bushels, with a fair prospect of a large increase. Elevator facilities are being increased by the N. P. Road. The relative value of the flat warehouse and elevator is being freely discussed at Winnipeg. New mills are being projected, and joint stock companies formed for the purpose of building them, but there is, and will be for a long time, more profit, so far as exports are concerned, in shipping the grain. No. 1 hard wheat is shipped to Goderich, Ontario, from Port Arthur.

WINTER FREEZING OF WHEAT.

In the *Ohio Farmer* Mr. Stephen Powers gives a unique account of the escape of a large portion of the grain in a twenty-acre wheat field on the Muskingum River, that on Feb. 9 of this year was submerged from five to ten feet deep, and afterward bore the later heavy freezings. This field, extending nearly to the river, was on two plateaus, the larger portion on the second or higher, a narrow strip surmounting the latter on the back side. The current, with depth as above stated, was with difficulty stemmed by experienced oarsmen; stout wood fences, well anchored with pins and stones, were torn away, and in channels many yards of land were carried off. The spectacle presented after subsidence of the water was one of apparent hopeless ruin, and seemed to demand simply that it be plowed up. The traditiona objection of the Ohio farmer to this procedure led to its being let alone. Where the floods poured along the upper part and near the river the wheat and land were washed away; still enough remained, says Mr. Powers, to cover the ground with a fine filligree of fibrous rootlets. Freezing soon followed the few days of fine weather, but the wheat seems to have been protected by the flood deposit of muck and silt, through which the hardy little plants have struggled up. At the time of writing about one-sixth of a stand of wheat, averaging two feet in height, was to be seen on the lower corner, which was the richest part of the field, and fully six inches of the soil was gone, but the roots were all covered. This was corn land, sown to wheat without plowing or removing the stubs. Wheat, says this writer, is never "winter killed," it is water-killed. When drainage is perfect, he thinks we shall hear no more of that old humbug cry – "winter-killed."

AN OPTION CASE IN BALTIMORE.

Judge Sage of the United States District Court of Baltimore, Md., recently heard the case of Mixel & Co., members at the time of the transaction of the Baltimore Corn and Flour Exchange vs. Daniel Taylor, for failure to meet his losses in a wheat deal, the sum sought to be recovered being $3,957.22, with interest from December 1, 1881. This was the amount advanced on purchases of wheat aggregating 90,000 bushels, at a total cost of $137,194.72; and the deals closed at a loss to the defendant after exhausting his margins. The defense claims that these were gambling transactions made for the purpose of the mere payment of differences. Taylor claimed that he was simply the agent of John C. Allen, who was the principal, and had been so recognized by plaintiffs. The Judge, in charging the jury, stated that the transactions were nominally contracts for the future delivery of wheat, but the jury were to decide from the facts whether there was really any such intention, or whether the deals were simply made with the intention of staking the differences, and were thus simply gambling deals. While the plaintiffs had a right to contest for actual future delivery, and take margins for the same, the latter fact established, would non suit them on the ground claimed by defense. This point was fully elaborated and explained, and put the stigma of "illegal" clearly on such transactions. As plaintiffs were members of the Exchange at that time, if there was an express understanding between the parties that the rules of the Exchange should govern them, then these rules make part of the case and must explain the papers "bought and sold notes," that were used as to their technical meaning, and be so construed.

HOW FARMERS PLAY IT ON GRAIN MEN.

The system of undergrading and corrupt inspection is a swindle upon the *bona fide* purchaser, and a premium to every farmer to adulterate his productions. Wheat has but one ultimate use, and that is into flour, and its value is directly dependent upon its flour-making capacity. To base it upon another value is to swindle some one in the long line of purchasers, from the field to the bakery. The dealer has no direct interest whether a bushel of wheat contains 50 pounds of wheat and 10 pounds of chaff, cockle or cheat, so long as he can sell the 60 pounds at the same price he can sell 60 pounds of pure wheat. The farmer, of course, if he can sell the mixture, will not attempt to sell it pure, for as things go, he can get as much for one as for the other. But the miller not only can make no commensurate use of the adulterations, but is put to considerable expense to separate them.

Many farmers make it a practice to buy the millers' screenings for no other purpose than to put them back into wheat, and if the local miller refuses to recognize it as a milling quality, he will sell it to the grain dealer, or if the regular dealer will not accept it, will sell it to a scalper, who will send it to the market having the lowest grade, where it is passed, say as No. 2, and the buyer at a dsstance, who accepts the inspector's certificate that the grade represents a certain value in flour, is swindled when he finds that it is a grade or two too high. Instances are not isolated of such transactions, but in fact have grown into common practice.—*Exchange.*

Communicated.

BOOK-KEEPING IN WAREHOUSES.

Editor American Elevator and Grain Trade:—I wish some one of your readers would outline a simple system of book-keeping, suitable for a country warehouse. A few ideas on this subject would greatly interest

Yours truly, AN IOWA SUBSCRIBER.

WHO SHOULD STAND THE LOSS?

Editor American Elevator and Grain Trade:—A farmer stored in my house, several months ago, 622 bushels of wheat that would grade about No. 2 spring. He had no place for it on his farm, and wanted to utilize the solid weather to get it in. An agreement was made that he should pay a small storage charge, and I was to buy his wheat at any time he might designate. When, at last, he wanted money, the wheat, on weighing, showed only 614 bushels and a few pounds. The farmer insisted that he had delivered me 622 bushels, and had paid storage on that amount. I insisted that while he had delivered me 622 bushels I had only bought 614. Finally we compromised the thing by his paying storage on 614 bushels and calling the amount purchased 618 bushels. I suppose the loss in weight was due to drying out, and I think my position was correct. What say you?

Yours truly, BACKWOODS.

[We think the farmer was clearly in the wrong. But it is best, under such circumstances, to have a written understanding.]

Late Patents.

Issued on June 17, 1884.

BELT-SHIFTING DEVICE.—Wm. Diebel, Philadelphia, Pa. (No model.) No. 300,579. Filed May 13, 1884.

COMBINED CHAIN AND ELEVATOR BUCKET.—Morrill A. Shepard, Lebanon, Ill. (No model.) No. 300,518. Filed Dec. 1, 1883.

FANNING MILL.—Martin S. Field, Racine, Wis., assignor to Johnson & Field, same place. (No model.) No. 300,456. Filed June 26, 1883.

GRAIN SEPARATOR.—Chas. E. McNeal, Silver Creek, N. Y. No model.) No. 300,621. Filed Feb. 18, 1884.

SEPARATOR FOR SHELLED CORN, ETC.—J. Silas Leas, Rock Island, and John B. Cornwall, South Moline, Ill., assignors to the Barnard & Leas Manufacturing Co., Moline, Ill. (No model.) No. 300,715. Filed Feb. 7, 1884.

Issued on June 24, 1884.

EAR CORN FEED REGULATOR.—Samuel E. Marsh, Tarkio, Mo. (No model.) No. 300,991. Filed April 3, 1884.

CORN SHELLER.—Alfred Kiger, Daretown, assignor of one-half to James Wornton, Hainesport, N. J. (No model.) No. 300,872. Filed Oct. 31, 1883.

MEASURING APPARATUS FOR SEPARATORS.— Jacob Hug, St. Jacob's, Ill. (No model.) No. 300,779. Filed Feb. 16, 1884.

Issued on July 1, 1884.

GRAIN CAR DOOR MECHANISM.—John A. Hagan, Three Rivers, Mich., assignor of one-half to the Sheffield Velocipede Car Co., same place. (No model.) No. 301,117. Filed Feb. 11, 1884.

Issued on July 8, 1884.

CONVEYOR.—Albert P. Massey, Cleveland, Ohio, assignor to the American Seed Oil Co., same place. (No model.) No. 301,506. Filed June 4, 1884.

PORTABLE PLATFORM DUMP AND ELEVATOR FOR CRIBBING CORN.—Henry Hagge and Warren L. Williams, Walnut, Iowa. (No model.) No. 301,588. Filed April 28, 1884.

PROCESS OF AND DEVICE FOR VENTILATING AND TRIMMING GRAIN.—William H. Newton, Chicago, Ill. (No model.) No. 301,513. Filed Dec. 31, 1883.

The captains of grain vessels have been greatly disappointed in finding the tolls on the Welland Canal still retained. The circular of the Inland Revenue Department, of June 4, orders the collection of the full tolls; the reduction will be paid by the Department upon evidence brought by the shippers that the council's conditions have been complied with.

MICHIGAN WHEAT.

The Secretary of State, of Michigan, issued on July 11, the usual periodical crop report. The total crop of wheat in that state, harvested in 1883, was 23,478,252 bushels, of which 20,772,782 were grown in the southern four tiers of counties, and some 2,700,000 in the counties north of these. The yield was over 200,000 in the southern, and over 120,000 bushels in the northern section more than the October estimates of the Department. The wheat area this year is reported at 1,520,766 acres. These figures represent 1,035 townships or 92 per cent. of all the state, and are from official sources. Ten in the southern four tiers and twenty-nine in the Upper Peninsula only are excepted. The estimated total yield of wheat for this state this year is 21,965,391 bushels, and is a little over 1,500,000 bushels less than in 1883. The actual decrease of wheat area seeded is 7 per cent., or about 114,000 acres. The yield per acre is, in the southern section, .92 of a bushel less, and in the northern 2.09 bushels more than last year.

The reports of the wheat marketed include 227 elevators and mills; 196 or 99 per cent. being in the southern four tiers of counties. The aggregate was 239,437 bushels, of which 50,686 were in the southern or first tier; some 89,000, in the second; 48,000, in the third; about 42,600 bushels in the fourth, and 8,844 in the counties still north. Fifty-seven elevators and mills, or 25 per cent. of the whole, report that no wheat was marketed during the month. The aggregate during the eleven months ended June 30, was 9,411,961 bushels. There is still in farmers' hands, in the southern four tiers, 6 per cent., in the northern, 3 per cent. of the old crop, or from 1,000,000 to 1,500,000 bushels. The condition of corn is 118, oats 95, barley 97, as compared with last year.

ILLINOIS CORN.

The July reports of the Agricultural Department of the state of Illinois cover 600 points, and give grounds to expect a larger crop of corn than has been produced for several years. The condition is generally good, and the stand above an average. There probably, says the report, has never been a better corn prospect on all the tile-drained farms in the central and northern sections of the state. The owners of farms make no complaints. The northern division promises a 20 per cent. larger yield than last season, at the same date, and 36 per cent. better than in 1882. There is a decrease in the corn acreage in that section of 2 per cent., though it is larger in several counties. The acreage of this year compared with 1883 is 98 in the 33 northern counties. The average condition compared on June 1 was 98, and 100 on July 1. On same date 1883, it was 80, and in 1882, 64. In eighteen of these counties the average yield of corn promises to exceed last year's by from 1 to 12 per cent. The southern thirty-four counties have a corn area equal to last year, and a promise of 85 per cent. of an average yield per acre. Little improvement has been made in the last month, and the crop is no better than last season. The acreage compared with 1883 is 100; condition on June 1, 81; on July 1, 85. On the same date in 1883 it was 86, and in 1882 it was 81. The thirty-five central counties promise an average yield of corn per acre; this includes the "corn belt." Since the June returns the condition has been improving, and an average or better yield is assured in the majority of the largest corn producing counties in the state. The total acreage, as compared with 1883, is 89. The condition on June 1 was 90; on July 1 it was 95, against, respectively, 82 and 60 at the latter date in 1883 and 1882. In sixteen of these counties there is an increased corn area, over last year's of from 1 to 5 per cent.

CORN AND HOG CHOLERA.

A Kentuckian discusses the causes and history of Hog Cholera in the columns of the *Indiana Farmer*, with special reference to an opinion rendered proverbial: That when corn is high, cholera is scarce. The writer seems to have been a close observer of the progress, localities, and remedies used for many years in this destructive disease, and finds no confirmation of the idea that corn is a factor even in the cause. He is not a scientific observer of the type of Pasteur and Koch, but furnishes some valuable practical inductions. The earliest invasions of cholera were of that stealthy character that often the first thing noticed was bedfuls of dead hogs, who had never complained. At first it was found to confine itself to the water courses and low lands, but after a few years it spread beyond. Various irregular symptoms occurred at times, such as lameness, coughing, and vomiting, or a stupid condition. Large numbers died rapidly, as above noted; others in three or four days; sometimes they lingered for weeks. The finest animals were taken at first, and their bodies assumed a melted state, or were just ready to melt. Remedies generally proved of little avail. Feeding at the mouths of coal pits was tried, because one farmer's lot was said to have escaped that were so fed; but no beneficial results followed, and this man's stock, after a year or two, were seized like the rest. Old bacon, tar, etc., were tried, with the same negative effects. The "mule-hoof" breed got a name for being cholera-proof, but when tried, were no safer than the rest. In all the cases at this period of freedom from this plague, or of recovery, corn was fed freely; and since the abatement, probably by means of the preventive measures, such as segregation, cleanliness, etc, this grain has only enlarged its field of food utilization.

General Items.

The news from the grain districts almost everywhere continues of a most favorable character. In many sections the harvest is already under way, and the weather as a rule is all that could be wished to facilitate getting in the crops.

An institution designated as the Public Board of Trade, Cleveland, O., was closed by the police a few days ago, and the proprietors arrested under the law against gambling. The operations were on the principle of speculation in bucket-shops, except that the quotations were artificial, and indicated automatically by machinery, instead of following the course of the markets.

The superintendent of one of the Brooklyn elevators has taken precautious against a repetition of the weevil pest of last year. Immediately after the removal of grain from a store, the whole surface which came in contact with the grain is whitewashed. Though this cannot touch the germ of disease in new wheat, it destroys any eggs or larvæ that may have been deposited by the destructive insect.

The old-established grain firm of Chicago and Toledo, Reynolds Bros., exhibited on 'Change at Toledo, June 26, the first samples of the new crop. Their buyers are scattered throughout the states of Illinois, Indiana, Missouri, and Kansas. This firm expects to handle 2,000 cars of wheat per week as soon as the crop is in condition. The Reynolds Bros. are said to be the largest buyers of actual grain in this country, possibly in the world.

The multiplying property of wheat has never been better illustrated by a practical test than by that of a Dakota farmer, who planted a single grain in one of his oat-fields in 1881. From it grew twenty-two stalks, each having a full head. These yielded 860 grains, 760 of which were planted the next year, producing one-fifth of a bushel of fine wheat. This was planted in the spring of 1883, and yielded seventeen bushels, making 1,020 pounds of wheat from one grain in three years.

The *Northwest News*, of Portland, Oregon, brings assurance of a good harvest in that state as follows: "It is safe to say that the crop this fall will be one of the largest ever harvested in this state. With a wheat crop of 18,000,000 bushels, a wool clip of 10,000,000 pounds, a large hop yield, and an immense fruit crop, the Pacific Northwest will rapidly overcome the effects of * * the short crop of last year. This is essentially an agricultural community and a good crop of wheat, fruit, wool and hops means good times."

W. C. Van Horne, Vice-President and manager of the C. P. Railroad, on his return from a recent trip to Winnipeg, in conversation with a Toronto reporter, said that the so-called arid region west of Moose Jaw is the best watered section of the western portion of the road. The rains this season have been frequent and continuous, more so than in the, as supposed, more highly favored regions. The company's experimental farms there are all doing, he says, magnificently. Grain is much farther advanced in that section than in Manitoba, and there will be, it is estimated, at least 10,000,000 bushels for shipment from the Northwest this fall. The road, it is expected, will be open on the north shore of Lake Superior, for through traffic, at an early date next year.

Canals and Marine.

Business was suspended for over a week on the Erie canal by a bad break at Palmyra.

The Chesapeake and Ohio Canal sustained a number of very severe breaks in the severe storm of last week, which President Smith says will require two weeks to repair, and cost the company about $20,000, besides during the making of the repairs the business of the canal will be suspended. The canal, under all its adverse circumstances, will make a poor show of business the current season.—*Baltimore Journal of Commerce.*

Insurance men are trying to write grain cargoes to Montreal by subjecting each barge from Kingston to its own average. In the past where a vessel's cargo loads two or three barges, and one of them meets with disaster, the fraction of the cargo thus lost has been considered a total loss, and has to be paid in full from the policy. The new rule would make it only an average loss on the entire cargo, and if the insurance men can adopt it, it will save them some money.

The net profits of the Suez Canal for the past year were a little over $7,000,090—profits which exceeded by far even the most sanguine hopes of some of the original shareholders. An experiment is now being made along the canal for lighting it by electricity, and it is expected that mail steamers will shortly be able to pass through the canal by night. Hitherto night traffic in the canal has been entirely suspended. It would seem from the foregoing that the Panama Canal might possibly be an equally great success.

Congress has passed an act, which became a law June 26, relieving our shipping interests of a great many burdens, in which river commerce finds some benefit. It provides that hereafter no hospital tax for seamen is to be collected, and that the expense of the Marine Hospital Service is to be borne by the United States, and be paid out of the tonnage duties on foreign commerce provided for by the act. These tonnage duties are reduced from thirty cents to three cents per ton in one class, and from sixty cents to six cents in another class.

The best indication of the existing depression in the transportation business is found in a comparative exhibit of average freight rates. From the annexed statement, which we extract from the Buffalo *Commercial*, it will be seen that the average by lake for the month just closed is lower than ever before, with one exception, while the average by canal is a cent and a fraction below the lowest monthly average yet reached:

	Lake.		Canal.	
	Wheat.	Corn.	Wheat.	Corn.
1884	2.2	2.0	3.8	3.4c
1880	5.0	4.3	6.9	5.5c
1877	3.5	2.9	5.8	5.0c
1875	3.9	3.6	7.4	6.6c
1873	7.4	6.5	11.8	10.6c

An Eastern paper says: "Excessive competition among the transportation lines themselves, combined with a diminished volume of business, seems destined to accomplish a reduction in freight tariffs which popular demand or legislative enactment fail to secure. The trunk lines are fighting among themselves for business, which is insufficient in bulk to supply them all with remunerative traffic. Propellers, vessels and even canal boats are working at starvation rates. Now comes a war of rates among those engaged in Hudson River towing. The season opened with little promise. A war soon broke out between the two competing lines running from Troy to New York City, a distance of 150 miles. Rates were cut from $23.50 per boat down to $10, then to $8, next to $5, and finally it is stated that boats were taken down for $1 by what is termed the opposition line. The danger now is that the stronger of the two lines will succeed in buying the other out, attempting a monopoly of the traffic and a schedule of advanced rates."

Last fall the lines of propellors running between Duluth and Eastern ports on the lakes were unable to take all of the East-bound freight brought there by the railroads, four of which bring grain and flour—the Manitoba, St. Paul and Duluth, Northern Pacific, and the Omaha lines—and the Duluth and Iron Range will bring iron ore. "Already this season," says a Duluth dispatch, "the boats have shown their inability to take the freight as fast as received, and it is accumulating in the warehouses and elevators, and long lines of cars now wait to be unloaded. Representatives of the various railroad lines have been here looking into the situation, in view of the greatly increased amount of wheat and flour expected here this season. It was agreed that more elevators and boats are imperatively demanded to handle the increasing business of the port, which, if not furnished by the existing elevator and propellor companies, must be provided by the railroad lines interested, and steps to that end will be immediately taken."

The Detroit Commercial has the following: "Marine insurance men are still waiting for something to turn up and that something seems to be in no hurry to put in an appearance. The marine agent of the Phœnix, of Brooklyn, N. Y., in this city, speaking of the dull times said: 'All hull insurance having been completed at the opening of navigation and there being practically no wheat shipments our only hope is in the coming harvest. If that is good, of course we must get a share of what's going. Last year business was dull till August, and I suppose it must be so again this year.' Another well-known agent when asked why there was so little grain shipment in Detroit, acknowledged himself entirely nonplussed, but added his conviction that discrimination in rates was the prineipal cause of its being kept away, while Toledo and Chicago elevators are kept chock full. 'The railway companies all have two prices to shippers and no one can tell what they are actually receiving but the parties immediately concerned.' 'Will the raising of rates for shipping grain just come into operation influence your business?' 'I hardly think so,' was the reply. 'At any rate it is not likely to divert the traffic to the vessels. They seem to have quite abandoned grain carrying as far as Detroit is concerned. There's not enough money in it, even if there were cargoes for them.' An important item of interest to the marine men is that in all probability the harvest will be ingathered a couple of weeks earlier this year than last, thus hastening the business by that brief period."

In spite of the obstacles due to the unhealthiness of the district, sparseness of population, progress is being made in the construction of the Panama canal. The line of canal is divided into twenty-three sections, superintended by four engineers-in-chief. The preliminary work of organizing is now practically completed, and actual work on the canal begins to make a show. The amount of excavation completed up to March last is about six million cubic meters, and it is anticipated that next year three times as much will be completed. Six dredges of the Slaven type are being constructed in Philadelphia, at a cost of £25,000 each; they are capable of dredging alluvium and soft coral rock. Schist and gritstone can be dredged after blasting. Two dredgers are expected to arrive from New York; one dredger was burned in January, but has been replaced by another; one commenced work in May. The sum expended during the past three and a half years amounted to between £6,000,000 and £7,000,000. The effect of the canal operations has been to double the traffic in both passengers and goods on the Panama railway. Panama itself is increasing in population, and building is very active, whilst at Colon, the other extremity of the line, the place is hardly to be recognized; from a small hamlet in 1880, it has become a thriving town with a brisk trade, and streets swarming with people. Houses, stores and other edifices have been constructed all over the island of Manzanilla, and the swamps and marshes are being reclaimed. In the harbor as many as sixty ships may be seen at times lying at anchor waiting for their turn to be discharged, the accommodation in quays and wharves being quite insufficient for the rapidly grown traffic. Upward of 82,000 tons of machinery and stores were discharged last year for the Canal Company at Colon. There is thus a considerable activity, and the construction of the canal is indirectly benefiting the country generally, developing and bringing it within the boundaries of civilization and commercial enterprise.—*The Mechanical World.*

What has become of the proposition in Congress to appropriate money to maintain the Erie Canal? The people of New York very cheerfully voted, two years ago, to make the canal free, although they had complete understanding that it would cost them annually somewhere near a million dollars, with a possibility of exceeding that sum. This decision was reached by the ballots of the people because they believed that a free channel would contribute to the prosperity of the state to such a degree as to compensate the outlay. But the benefits are not alone to the state of New York. They are shared by the New England states that take the produce of the West, and by the Western states that send their grain and other products to market by the lakes and the canal. It is hardly beyond the truth to say that the benefits are national; certainly quite as much so as those that flow from commerce on the Mississippi River. But there are millions appropriated every year for the improvement of the Mississippi, and other millions ostensibly for the improvement of streams that have very little to do with internal commerce, and nothing whatever with the export trade. We have no fault to find with efforts to improve the channel of the Mississippi, even at the cost of millions annually, but the same arguments that justify appropriations for this purpose would seem to apply in the case of the Erie canal. It is true, this artificial channel is the property of the state, but it serves the purpose of a natural water course, and requires a considerable sum of money every year to maintain the channel in working order. The proposition to construct a canal to connect the waters of the upper Mississippi with the chain of lakes for which the Erie canal is an outlet, has been favorably considered by committee of Congress, and the Western states directly interested have urged with a great deal of force that the government should appropriate money for connecting the lakes with the Mississippi. It hardly seems wise to undertake this scheme until the general government can be assured that the Erie Canal will be available for completing the channel. It is true, the state of New York keeps the canal available under the present system, but what guaranty can there be that it will be kept so perpetually? The safe way is for the general government to enter into an arrangement by which it can establish a partnership at least, and pay its proper share for the benefit of commerce quite as important during a large portion of the year as that which floats on the Mississippi.—*The Husbandman.*

BEEN THERE.—"If I buy 1,000 bushels of wheat in a bucket-shop at eighty-eight, and the price goes to ninety cents, and I sell, how much do I make?" he asked, as he held the other man against a telegraph pole.

"You will lose exactly $20."

"How?"

"Why, wheat will decline to eighty-six, sure's you're born. I've tried it, and know."

OPTION DEALS.

It has been estimated that within a period of one year $7,000,000 have been lost by the citizens of this state in option deals.

Now no one who has not seen, handled and counted $1,000,000 has much appreciation of what it is, and much less can he have of the greater sum. But some true realization may be had by comparison as to the effort required to earn or make it, and as to what it may accomplish or pay for. Seven million dollars would perhaps be earned by 5,000,000 days' work in useful callings. Estimating 300 working days to the year would give 16,666 years of time, or it would fill the average measure of existence, thirty years, of 555 men.

Its purchasing power would equal the value of 1,000 140-acre farms at $50 per acre. This simple illustration gives us some idea of what $7,000,000 are and what they can be made to do, if retained at home instead of being shipped into the commercial centers to pay losses incurred in speculation.

But there are incidental losses that no man can correctly estimate; the drain of more money into the cities than is needful for the payment of current balances of exchange results in violent speculative uses, and excess of supply in the cities results in low rates of interest, but has the converse effect of high rates in the rural districts, where money is always in good demand for production of crops, and the mechanical improvements, as the clearing, fencing and draining of land, the construction of buildings and purchase of machinery and tools required for cultivation.

Given that the rural West holds its earnings for development and increased production, the large line of loans made by Eastern insurance comranies would not be required by the West.

The successful and profitable prosecution of agriculture requires capital to supplement the labor. Many things have to be purchased while crops are growing. Farm laborers should be as promptly and regularly paid as the operatives in mechanical matters are, and when they are the drift of labor from the rural regions into the towns for employment will lessen, the labor will also become more efficient, insuring greater returns.

So much is based on agriculture that the greater the returns therefrom that corresponding increase in many other things is sure. Agriculture and mercantile and manufacturing matters depend largely upon each other, but the first is the grand base and it must prosper or all other things must languish. It is therefore entitled to, and should have all that is due it in the way of consideration from the financial and mercantile institutions whose very existence primarily depends upon it.

There should be enough of its surplus profits left at its disposal to assure success in its prosecution in the direction of constantly increasing volume. The fact that the workers who earn the money lost in grain gambling do not personally or primarily lose it, does not by any mean lessen the loss to the general community. Were this money retained at home and loaned there to manufacturers or young farmers its reproductive power would increase the export of merchandise, and the numbers of those who owned property would steadily increase. There are hundreds of young men who would soon be working for themselves instead of being employed by others. The rate of wages and what does or shall fix same, about which so much has been written and in regard to which there is periodic difficulty, would soon regulate itself, and that too, rather in the interest of the farmers and workers. Produce and stock gambling beget fictitious basis in all values, and that is followed by failures and depression everywhere.—*Indiana Farmer.*

THE SOUTH AND THE CEREAL CROPS.

It is an important fact that this year the Southern states have devoted a larger acreage to cereal crops than ever before, and in many cases the producers will be in a position to send their surplus grain to the Northern market instead of drawing upon the latter for supplies, as they did last year. Generally speaking, the state of Texas is absolutely self-supporting this year, raising enough grain for her inhabitants and for feed for her hogs, sustaining immense herds of cattle within her own borders, raising cotton and wool enough to supply all her needs, and, doubtless, having a fair amount for all necessaries for export.

What is true of Texas is also true, in a great measure, of other states of the South. The early report of the Commissioner of Agriculture noted a large increase in the acreage of grain, and the weather has been all that could be desired for the growth and ripening of this grain. It is now reported that Georgia is sending oats to Baltimore for the first time in her history, and this indicates a surplus of small grains in other states. The railroads of the South have lately been reorganized and exteuded, and thus facilities are offered for the transportation of Northern products which have not been enjoyed in former years. Capital is being invested in manufactories of various kinds, mineral and agricultural resources being rapidly developed, and the people of the South are encouraged to still greater efforts.

The great want now appears to be immigration. Foreigners who flock to our shores are directed to the West and Northwest, and apparently shun the South. If more attention were paid by Southern associations to the matter of immigration, the result would doubtless be highly beneficial, not only to the country but the individual.—*North and South.*

Elevator and Grain News.

A fine elevator is being built at Ellendale, Dak.

Hoffman & Stevens, grain dealers at Mendota, Ill., have sold out.

Meader & Co. are building a round elevator at Waconia, Minn.

McLemore & Bro.. of Columbia, Tenn., are enlarging their elevator.

Elevator charges in Buffalo, N. Y., have been advanced three-quarters of a cent.

F. G. Butler has bought his partner's interest in the elevator at Seballer, Iowa.

Pillsbury & Hurlbert are building a 50,000 bushel elevator at Devil's Lake, Dak.

Spencer & Long, grain dealers at Lampasos, Tex., have dissolved partnership.

Hopps & Hatter, grain commission merchants of Baltimore, Md., have dissolved.

A. Oppenheimer & Co., grain commission merchants of Dallas, Tex., have sold out.

James Capen & Co., grain dealers, of Chebanse, Iil., have assigned to James Parch.

R. Waldron succeeds Waldron & Burnett, grain and feed dealers, of Jackson, Mich.

Thomas G. Allen & Co., grain dealers, Greenwich, R. I., are closing out their business.

W. E. Butler succeeds F. A. Winchell & Co., in the elevator business at Galva, Iowa.

Dudley & French, grain dealers, of Mapleton, Iowa, have sold out to Wakefield & Corley.

G. S. Everingham & Co. succeed McGeogh, Everingham & Co., grain dealers, etc., of this city.

Poole & Sherman succeed Poole, Kent & Co. in the grain and provision commission business, Chicago.

F. W. Lahnsen has been admitted to the firm of Tate, Hinrichs & Co., grain dealers, etc., of Baltimore, Md.

V. Bowerman, an extensive grain dealer of Brandon, Mani oba, is financially embarrassed; no assets are reported.

Dillingham & Co., hay and grain dealers of Denver, Col.. have dissolved partnership. W. B. Hanscombe continues.

Aldrich, Fisher & Co., grain dealers, Chicago, Ill., have dissolved partnership, and are succeeded by B. F. Fisher & Co.

Coover & Matthews, flour and grain dealers of Balti more, Md., have dissolved partnership, and are succeeded by Coover & French.

The grain firm of Imboden & Wickham, of Kansas City, Mo., has been dissolved, and is succeeded by McLaughlin & Wickham.

The grain commission firm of D. R. Francis & Bro. has been incorporated at St. Louis, Mo., with a paid up capital stock of $100,000.

Mason Gregg has bought of the Frost Mfg. Co. of Galesburg, Ill., the machinery complete for his houses at Western, and Tobias, Neb.

C. Arnold & Co., Sterling, Kan., are building a large elevator in connection with their new roller mill now in process of erection at that place.

Work has been commenced on an elevator of 300,000 bushels' capacity at Glyndon, Minn., by the Farmers' Union Elevator Co., to be finished within a month.

The elevator at Devil's Lake, Dak., which is to be of 50,000 bushels' capacity, had reached, when last heard from, the height of 73 feet, and the roof was being put on.

E. A. Kent & Co., grain commission merchants, of New York City, and Chicago, Ill., have dissolved partnership. A new firm has been formed under the same style.

Messrs. Morrissey Bros., of Plattsmouth, Neb., have put seven of the "Giant" End Shake Fanning Mills, made by Dickey & Pease, of Racine, Wis., into their elevators.

Goold Bros. of Howard, Dak., are building a roller flour mill of 75 barrels capacity; they are putting in an engine and boiler bought of the Frost Mfg. Co. of Galesburg. Ill.

We are sorry to learn that F. A. Winchell, of Kingsley, Iowa, an extensive grain dealer, has been compelled to make an assignment June 28, for the benefit of his creditors.

Messrs. Mulkey & Co., of McPherson, Kan., are just putting into their elevator three of the large size "End Shake" Giant Fanning Mills, made by Dickey & Pease, Racine, Wis.

G. P. Chessman, York, Neb., is remodeling his house, and putting in a handsome 15-horse power engine, and a 20-horse power boiler, bought of the Frost Mfg. Co. of Galesburg, Ill.

The new elevator at Sabin, Minn., built by the Farmer's Elevator Co., is the first to be completed of the series. It is a fine appearing building, and all the stockholders are very much pleased.

At the Farmers' Club meeting recently held at Albert Lea, Minn., a platform was adopted which declares against railroad discriminations and the free pass system, and in favor of a reduction of the tariff, and in favor of selling grain to resident buyers; also against railroads being interested in the purchase or sale of farm produce, and against food adulteration.

Willford & Norhway, Minneapolis, Minn., have received an order for a large lot of mill furnishings from E. A. Burrage, Appleton, Minn., for his grain elevator.

The partnership heretofore existing between Frank Goodnow & Ca., grain dealers at Bridgeport, Kan., has been dissolved, Frank Goodnow retiring and a new partner being admitted.

The Union Elevator Co., of Kansas City, Mo., have recently ordered a new 18x42 Reynolds-Corliss Engine and complete power outfit from Messrs. Allis & Co., of Reliance Works, Milwaukee.

Holmes, Brazer & Ca., lumber and grain commission merchants of Philadelphia, Pa., have dissolved. Charles J. String and William P. Brazer form a new firm under the style of String, Brazer & Co.

The Franklin Warehouse & Elevator Company, of Franklin, Tenn., are erecting a large wheat elevator upon plans furnished by the Richmond City Mill Works, of Richmond, Ind., who also furnish the necessary machinery.

Charles Arnold, of Sterling, Kan., is building a large elevator in connection with the new roller mill now being completed for C. Arnold & Co. The Richmond City Mill Works, of Richmond, Ind., furnish all the machinery for both mill and alevator.

Geo. Marks & Co. are putting in the machinery of their new elevator at Hastings, Neb. The Frost Mfg. Co., of Galesburg, Ill., supply a 20-horse power engine, and a 25-horse power boiler, with all the necessary pulleys, shafting, belting, cups, etc.

J. M. Sewell & Co. are putting in steam power at Juniata, Neb., and have bought all their machinery of the Frost Mfg. Co. of Galesburg, Ill. This is the third outfit supplied to this firm by this company. Messrs. Sewell & Co. are an enterprising firm.

S. F. Drake, of New York City, former President of the St. Paul & Sioux City Railroad Co., says that the suit brought against him and others by the Chicago Linseed Oil Co., for $100,000, is on a contract for flax seed, made several years ago, and will not amount to anything, having no legitimate basis.

The Farmers' Union Elevator Co., at Sabin, Minn., is rapidly raising its new elevators. The lumber is being unloaded at Glyndon, south of the N. P. R. R., and material is on the ground at Barnesville, Kragnes, Carman, Angus, Argyle, and Stephen. The houses are built in crib style, each to be of 30,000-bushels capacity, and require 120,000 feet of lumber.

SERVICE PERFORMED—NOT "WHAT TRAFFIC WILL BEAR."

Two men are in line at the window of the ticket office of the New York Central Railroad. The first purchaser is dressed in rough clothes, wears a striped shirt and heavy shoes. He is evidently a laboring man of some sort. He inquires the price of a ticket to Poughkeepsie. The reply is prompt, "One dollar and forty-six cents." He pays the money and passes on. The next purchaser appears to be from a different class in society. He belongs to a more genteel order. His hands are not soiled or calloused with toil. His clothes and toilet are faultless, and when he comes to inquire for a ticket to Poughkeepsie, the same charge is made to him as to his predecessor; he pays his money from a fat purse, and takes his seat in the same car with the humbler traveler. The laborer, or mechanic, as the case may be, is probably going in search of work, for wages anywhere between $1.50 and $3.00 for ten hours' service. The gentleman may be a business man or lawyer, who is called from town for the day to attend to a matter which will yield him a profit anywhere between $25 and $100. Now if the principle is a true one, in the management of transportation affairs, that charges should be made according to what traffic will bear, the ticket agent should have been a keen reader of human nature, who would invite the laborer into a private room, inquire his trade, what wages he was earning, how large a family he had, and what was the size of his bank account, and conclude by selling him a ticket to Poughkeepsie at twenty-five cents; and one to the wealthy aristocrat at about $3.00.

This may seem a little chimerical at first blush, but the principle upon which we have reasoned in regard to passengers is that in active operation in regard to freight. What is justifiable in the one instance certainly should prevail in the other. Here stand in a pile of freight two cases or boxes of about the same weight and appearance: the one contains dry goods, and the other is filled with dry salted pork. Both will travel the same distance on the same road, and in the same car. Why should the dry goods pay higher charges than the provisions? The reply of the railroad sophist is that they are worth more money, will yield to the parties handling them more profit, and in case of injury from careless transportation will cost the company more damages; therefore, for these three reasons, the dry goods can "bear more" toll. And for the same reasons we urge that the wealthy business man is able to pay more for his ride to Poughkeepsie than the mechanic. He is worth more, he can earn more, and, in case of personal injury through fault of the railroad or its employes, he can, likely, collect more in a suit for damages. Why then not hold the inquisition over the passenger, his business prospects and financial standing, just as over the two boxes of freight?

The ridiculous inconsistency of the existing system of railroad charges where freight rates are gauged according to "what the particular traffic will bear," will, we think, be apparent to our readers from what we have said. In England, passengers ride first, second, or third class, according as they may choose to pay for accommodation in first, second or third class coaches; in this country the same rule should obtain, and, with us at least, two grades of accommodation are usually afforded—that of the regular passenger car, and that of the Wagner or parlor car. Now precisely the same terms should be made to freight. No railroad agent has a right to inquire what this case or that barrel contains so long as the package is not of a damaging character to the vehicle or accompanying freight. Per hundred pounds, or per cubic foot, accommodation in the same conveyance to freight should be fixed for all merchandise. And if the shipper is content with open or platform accommodation rather than sealed cars, or regular transportation rather than fast freight, then his wishes should be met and rates graded accordingly. As a railroad company should make charges according to work performed and with impartiality, the present system of freight grading and discrimination is anything but just to our industries and shippers. In this generalization we would make but one exception, and that will prove no exception upon thought. Heavy and bulky wares require more labor to handle in loading and unloading, and, therefore, should be taxed accordingly, and not at the same rate per hundred pounds as merchandise in convenient packages.

At a recent meeting of the joint executive committee of the Eastern Railroad pool, held at Commissioner Fink's office, for the purpose of advancing rates on wheat, this question of grading freight, or rather regrading it, was brought up, We present below the substance of a portion of the discussion. The considerations we have already offered will, we trust, put this matter in its proper light with the bulk of our readers, and to them as well as the unconvinced, we shall only say that neither Mr. Gould, Mr. Vanderbilt, nor any of their associates or deputies, who are engaged in railroading principally, it would seem from the history of late years, to fleece the public to fill their own coffers, are the ones with whom the people should intrust the privilege of arbitrarily classifying freight and taxing it according to their estimates of what the traffic will bear. It will not be many years before a reform of the nature we have indicated will be effectually initiated, and every industry, like every tub, will be obliged to stand upon its own bottom. At that future period it will be impossible for the railroad magnates, because they happen to be interested in facilities for a live cattle traffic and slaughter at Eastern markets, to stunt and cripple the dressed beef industry by over-charges for transportation.

At the meeting referred to, Commissioner Fink alluded to the matter of taking grain, flour, etc., from the eighth class and putting them in a special class. Mr. Fink argued that grain was an international commodity, whose price was regulated by the demand in all the markets in the world. There were sixty articles which had hitherto been classified with grain, which had no attributes in common with it, and which were for domestic consumption and not subject to the same commercial laws. It was hardly right that the rates on these articles should fluctuate with the rates on grain. It might be necessary, for example, to change the rates on grain when those on pig-lead should remain steady. The same trouble existed in the seventh class. There are 180 articles put into the seventh class which have no relation whatever to provisions or the provision trade. He called attention also to the unfairness of reducing the rates on live hogs in the same proportion as on provisions. With the rates on hogs twenty cents, there was no chance for a profit, as it costs five cents for terminals. The Commissioner's suggestions were favorably received and for the most part carried out. There was a lively discussion over the advancement of rates on dressed beef and live stock. The Erie moved that the net cattle rate from Chicago to New York be forty cents and the dressed-beef rate sixty-eight cents. The New York Central thought this too low, and proposed a compromise on the seventy-five per cent. basis. All these propositions were lost when put to vote, and Mr. Fink announced, the vote being so much divided, that he would decide against any advance at present.—*New York Mercantile Journal.*

VERIFICATION OF THE BIBLE.—A Chicago Board of Trade man set out to "do" Europe and the East in a week or ten days, or such a matter. In youth he had absorbed some New Testament legends, and felt a sudden interest on arriving in the Holy Land to cross the Sea of Galilee. The laziness of the ferryman and the indescribable slowness of the craft terribly exasperated the Chicago man, when he testily inquired:

"See here, stranger, how long have you been runnin' this ferry?"

"Forty-five years," was the placid and lazy answer.

"Who held it before you?" asked Chicago.

"My father, who ran it fifty years," was the calm reply.

"Well, how long has this durned monopoly been in your family, anyhow?"

"Three thousand years," pensively spoke the ferryman, as his dreamy gaze wandered to the palm trees upon the shore.

"Well, by thunder!" shouted the Chicago man, with muttering disgust, "it is no wonder the Lord wanted to walk over!"

The price of wheat in Europe is now at nearly the lowest in this century. In most European countries the crop of 1883 wheat was sold at less than the cost of production.

Notes from the Exchanges.

The bucket-shop warfare, so far as the principles of their operation is concerned, is extending, and on June 27, a petition was brought before the Chicago Open Board requesting it to forbid dealings in differences with no intention of delivering the subjects of contract. The petition claimed that this was uncommercial conduct and aims to place the open board on the same footing of antagonism to it in all its forms, as the regular board holds, in which they are endeavoring to obtain the co-operation of all the grain exchanges of the country.

The Directors of the Chicago Board of Trade have posted the following amendment to rule 22, section 16, and advises its adoption: "Whenever a member or firm shall be unable to meet his or their obligations to the other members of the association, the respective debtors to said member or firm shall immediately deposit the amount of said indebtedness in the Clearing House, and the respective creditors of said member or firm shall immediately file their claims against the said delinquent. Said deposits shall be for the exclusive benefit of members of the association, and shall at once (or as soon as all disputed claims have been adjusted) be distributed to the aforesaid creditors in the proportion of their respective claims. Any creditor not filing his claim within five business days after said delinquency becomes known, shall forfeit all claims upon the said deposits."

The suspension of C. J. Kershaw & Co., one of the heaviest grain exporting firms on the Chicago Board of Trade, was posted on 'Change on June 23. This, like the Milwaukee suspension of Mr. Kershaw July 12, 1882, where he had for years held a high and respected position, will probably only be temporary. The cause is generally attributed to the condition of the market a few weeks since, at the time the Youngs unloaded their wheat. Unsettling rumors had come from Milwaukee, not heeded by Mr. Kershaw, who, with others, was caught. The personal integrity and honor of the firm are unimpeached, and friends are ready to aid at once. The liabilities are not made known, but it is said that they are all covered, while it is estimated that the turn of the market will bring the brokers on the debit side. The European exports of this firm have been many millions of bushels. Of the total 9,000,000 shipped from Chicago during the nine weeks preceding the failure, one-third is credited to Kershaw & Co.

A joint meeting of the Grain Shippers' and Receivers' Associations was held recently in the directors' room of the Chicago Board of Trade, to take action on the Richards system of grain-weighing at Englewood and make its receipts regular. This system consists of an elevated track, bringing the car to be unloaded directly above the one to be filled; and the grain is scooped out with steam shovels into hopper scales and thus weighed in transit, with no reference to car weights, also preserving the identity of the grain. Grain men are said to like the system. The discussion was informal and reached no result, being supplanted by the question of a fee of a quarter of a cent per bushel for weighing under the new system. The members of both associations protest against this tax on grain shipped over the Lake Shore road. They are willing to pay the present rate, thirty cents per car, but hold that the railroad company should pay the difference. A committee of conference was appointed consisting of P. P. Fish, J. M. Wanzer, P. W. Da er, E. B. Baldwin and W. P. Pope.

The Toronto Board of Trade, formed by the amalgamation on June 1, of the old Board and the Corn Exchange, is said to be in a very prosperous condition. The old Board of Trade was incorporated in 1845, and reorganized under an Act of the Dominion Parliament in 1869. It had done a good work in promoting the interests involved by civil and commercial methods, and when the union took place had 184 members. The Corn Exchange, organized in 1866, did not go into operation until 1872, and had at the time of the union 52 members. The old quarters of the latter, with its "Call Board" room, has been occupied since the amalgamation, but the structure is not commensurate with the importance and extent of the business of the new Board. A committee of the association are at work seeking a suitable location, and preparing plans for a building suited to the dignity of the new Board, and in accord with the growth and wealth of the City of Toronto A cordial state of feeling existed between the two associations in the former days of their separate existence, and in their combined official election due regard was paid to the previous official membership of both Exchanges.

The Chicago Board of Trade Committee on Markets recently discovered another neat scheme of the bucket-shops for stealing their reports. The Western Union had discovered that their grain wires running to the Open Board had been tampered with, and after testing with a galvano-meter, men were set to work to discover the point of leak. It was found that the wire had been tapped in the Board room, and a wire had been strung from an underground connection in the adjoining saloon. The plan was to run a wire thence to a telegraph office on Dearborn St., opposite the new Commercial Bank building, from which point all the "shops" were to be supplied. But the scheme was nipped in the bud, as above, before time had been given to conceal operations. It is said, had the mortar fully dried, the repairer might have been foiled in his search. A meeting of the Committee and W. U. officials was held, but, as the latter had not discovered the perpetrators, nothing was done. They still hope to make arrests. Another old plan is still, it is said, being worked by some of the shops, *i. e.*, to post a man in the alley, who secures the reports in various clandestine ways, as from Lester's bulletins, Board of Trade sneaks, etc., and forward them in fifteen minutes to the shops.

THE LATE PANIC.

One lesson taught by the late panic is the value, in these times of haste and worry, of conservatism. Conservatism is not of necessity a strict following of old ways and old customs, learning nothing and forgetting nothing. It is rather a cautious observance of the lessons taught by experience, which an old fogy of the present age has no use for. There are too many in every city obstructing the wheels of progress, but a plain, quiet, conservative man is of value and has a recognized place. What we need just now is conservatism and the putting on of the brakes in all kinds of business. We do not need old fogyism anywhere; have no use for it; but we do need a firm and continuous conservatism in business affairs just now; and particularly do we need it in the management of our monetary and financial institutions, especially those of a fiduciary nature, bank and receivers of trust funds and deposits. It has been the custom to sneer at those who are disposed to trim their sails, and are cautious to conversatism in their methods, and to praise the Wards, Fishes, Seineys and others who were "booming the market," building paper cities, investing in paper railroads and suppositious mines. We have had a little lesson in this which, fortunately, has not hurt any one but the operators, and checked rather than injured business. We trust the lesson will be remembered, and that we will learn that wealth made by constant, quiet, persistent business methods, rather than by sudden and doubtful ways, is the wealth that remains with the maker.—*Nashville Artisan.*

TRANSPORTATION.

BY RICHARD SORGEL.

The transportation over railroads is subject to frequent complaints. Once, it's the farmers in convention to discuss the transportation of their crops; then it's the manufacturers and jobbers in our large cities, and so we find that dissatisfaction arises at times among all classes of patrons of railroad companies, and it is evident there are evils which require remedying, the solution of which and its importance makes it one of the leading questions of the day. Before the introduction of steam our commercial intercourse was carried on principally over the natural waterway, and to extend their usefulness canals were constructed in some cases, either by the government or by chartered corporations. The transportation over these public highways of commerce has not been subject to complaints of exorbitant charges, discrimination, and other complaints made against railroad corporations The reason for this is to be ascribed to the full access *all* have to its use, subject, on our rivers, only to the necessary regulations for the safety of those making use of or employed in the traffic, and to insure all equal facilities to the use of the streams. Where charters have been granted to private corporations to build and maintain canals or plank-roads, in their charter they were granted the right to collect fixed charges from those who wished to use them, but we do not find that these same corporations were granted the exclusive right or control of the traffic over the canal or road, nor has exclusive privilege been granted to any single company or corporation over any of our natural waterways. As the transportation by this course has proven so entirely satisfactory I see no reason why the same principle cannot be practically applied to the more modern railroad (literally speaking). I should not favor the government owning the railroads nor rolling stock, and engage in the carrying business for its citizens, nor do I deem that necessary to carry out this principle. Let the building and maintaining of railroads to a matter of private enterprise, and grant them fixed charges which they shall be entitled to collect, applying the same principle as is used in collecting toll on canals. Then let the carrying trade be free to all who wish to engage in it and who will pay the charges to which the railroads are entitled, and subject only to government supervision, the same as exercised over boats and vessels, as is necessary to insure all equal use, which would amount to the government governing and controlling the movement of trains over the road. Or, to sum it up, let the carrying trade be conducted, in principle, by land over railroads the same as on the waterways.

HOLDING THE COOK OFF.—They were talking across the lunch table about a prominent Eastern man who married his cook within six months after his wife's death, and one of the gentlemen observed:

"If that is the case I want nothing more to do with him."

"But he was pinched, you know," protested a second.

"How?"

"Why, he had been cleaned out in a deal in oil, while the cook had made $50,000 in wheat."

"Oh—ah—I see. That alters the case. One must protect his commercial integrity, even if he marries his washerwoman with the crape on his hat. Still I should have advised him to put up a reasonable margin on pork, and held the cook off for three months longer."—*Wall Street News.*

Fires, Casualties, Etc.

D. J. Macaffee's grain depot at Athens, Pa., was recently destroyed by fire.

The establishment of Andrew F. Sawyer, grain dealer at Amherst, N. H., has been damaged by fire.

J. L. Packard, grain dealer, of Schuyler, Neb., has been burned out. Loss $600, with no insurance.

The elevator of the Minnesota and Dakota Elevator Co. at Atwater, Minn., has been burned, together with 12,000 bushels of wheat.

The elevator at Laporte City, Iowa, owned by Wagner & Lawson, was destroyed by fire lately. The building was totally destroyed and the machinery rendered worthless. The loss was about $3,000 with $1,800 insurance.

The elevator of the Minnesota and Dakota Elevator Co., at Atwater, Dak., has been burned, with several thousand bushels of wheat. The Stephen Elevator, at Detroit, Minn., has been burned, at a loss of $42,000. There were $2,575 insurance on building and machinery, and $1,500 on stock.

At Sacred Heart, Minn., June 25, the Milwaukee and St. Paul elevator was burned. The fire started from a hot journal in the shafting. The exact loss cannot now be estimated. There were 3,000 bushels of oats and a considerable quantity of wheat in the elevator. The insurance is said to cover all.

Lightning struck the steam elevator of D. R. Putnam at Garner, Iowa, on the evening of June 30, setting it on fire; but by means of a steam pump located in the building, and a good supply of hose, the property was saved, with slight damage only to the building and contents, all of which is covered by insurance.

Angested & Smith's Elevator, at Severance, Kan., was destroyed by fire at 1 o'clock A. M. of July 9. It was fired on the night of the 7th, but was discovered in time to save it. Just after Mr. Smith had returned home from watching it he saw the elevator in flames, showing the work of an incendiary. The loss was $30,000.

At 10 o'clock A. M., of June 20, a fatal accident occurred in this city at Armour, Dole & Co.'s elevator, corner of Twenty-second street and Canalport avenue. Miss Alice H. Willis aged nineteen and Miss Ruth L. Wells, from Boston, Mass., schoolmates, visiting in this city, arranged to visit this elevator. While witnessing, on the upper story, the rush of grain through a chute Miss Willis, stepping back to get a better view, had her dress caught in the main shafting, running two feet from the floor, and was whirled around several times, striking the floor with terrible force before her companions realized the situation. Every effort to rescue her was unavailing until her dress gave way leaving her mangled and lifeless. Miss Willis was the daughter of the late Hamilton Willis, well known in Boston, where her widowed mother lives. and she had made many warm friends in this city.

NEW YORK PRODUCE EXCHANGE REGULATIONS.

The decision of the courts overruling the stand taken by the Produce Exchange in this city (New York), compelling all its members to submit their disputes to arbitration or suffer dismissal from the floor, will attract universal attention. The old Corn Exchange, organized over thirty years ago, had one of the most liberal charters ever granted to a commercial body. The section which gave to the Arbitration Committee full power to settle all disputes and questions of business arising among the members, or between them and outside parties, was very carefully drawn, and inaugurated a new departure in mercantile affairs. There was no compulsion in regard to the submission of such disputes, but when voluntarily brought before the committee their decision was given all the effect of a judgment by a court of record.

The writer of this had the shaping of that portion of the charter, and has congratulated himself ever since on the beneficent result of that provision. The arbitration clauses in the constitution of the Produce Exchange, and of many other more recent organizations, were modeled after it and have adopted its leading features. There was no attempt in the Corn Exchange to force the members into arbitration under a threat of expulsion. We designed to leave it as a matter of honor, and it assumed at once this exalted position. A member of the Exchange who refused to submit to the proper tribunal his differences with his fellows, and insisted upon dragging the case into the courts, lost caste among the merchants and injured himself in the estimation of the community. We think it should have been left in just that position. There is a feeling among a large portion of the members that the present Produce Exchange has not done wisely in insisting as a matter of legal right upon the adjudication of all business disputes to which one of their number may be a party in interest. The case now decided at the General Term will probably be carried to the Court of Appeals, but we doubt if this judgment will be reversed.

There has been for several years a disposition on the part of the managers of the Produce Exchange to magnify their office and to substitute their individual desires and opinions for the law of equity which ought to prevail unquestioned in business circles. A little over two years ago provision was made for a gra-

tuity fund, out of which a certain sum was to be paid to the heirs of every deceased member. All who signified their intention to become beneficiaries were enrolled and assessed upon every death for enough to pay the gratuity, then amounting to a little over $1,000, and leave something toward accumulating a fund that shall ultimately give a sufficient income to pay the award without any further contribution. The amount paid has grown each season, as the number subject to assessment has increased. This was really a mutual life insurance, but would not have been liable to serious objection if it had been left for the voluntary adhesion of incoming members. But the governing authorities made certain arbitrary decrees, some of which were wholly unjust and indefensible. They enacted that all new memberships should be subject to the assessment, and that all of the old memberships should, on the sale of the certificate, not only be brought under the rule, but should on transfer to a new member pay all the old assessments, during which the holder had no benefit of the insurance. Thus two members die to-day; one of them has paid over two hundred dollars and has been insured ever since the system was established, and his estate receives nearly four thousand dollars, the sum now awarded to beneficiaries. The other one will receive nothing from the fund, but upon the transfer of his ticket to a purchaser his estate is compelled to pay the two hundred and odd dollars for back assessments precisely as if he had been interested and received the benefit.

Nor is this the worst of it. So much is now made of this life insurance feature that it regulates all the admissions to the Exchange. By an unwritten rule which really governs, no new member who is over sixty years of age can be admitted to do business on the floor of the Exchange. Many men at sixty-five are in the prime of their days. But a merchant of that age coming to this city, cannot secure admission, although he purchases a membership for that purpose. He is virtually shut out from business, although of ripe experience, of unblemished character, and the peer of any one who is engaged in trade in the city.

The committee on admissions now go still further. A member dies and the son succeeds to the ownership of the certificate, but he must pass the same ordeal as if he were a perfect stranger. He is examined as carefully as if he applied for $100,000 insurance on his life in the most cautious and conservative institution in New York. His heart beats are counted, his lungs are sounded, and the habits of his liver are brought up for inspection. If he is not a thoroughly healthy subject he is rejected, although he holds in his pocket a membership that cost four thousand dollars. Heart disease, weak lungs, poor digestion, imperfect secretions, do not incapacitate a man from carrying on a respectable calling, but he cannot do business in the Produce Exchange, and is at once refused admission.

In our judgment this is all wrong, and discreditable to the merchants who represent the great interests of trade in that organization. It was never designed as a mere life insurance company, but in the hands of its present managers this has become the controlling feature in all admissions. A man over sixty, however gifted and respectable, even if in perfect health, unless he joined before this rule was established, is shut out from business at the only gathering in this city where produce is sold; and a man, however young, if his tongue is furred, his heart guilty of an uneven beat, or he has any chronic ailment, may buy neither grain nor flour, pork nor lard, at this great center of business. This has only to be stated to carry with it to every unprejudiced mind its own condemnation.—*New York Journal of Commerce.*

COMPETITION OF MARKETS.

Markets that are common to various points of production or supply, control the rates from all these points by the competition which may exist with any one of them. The lowest rate to the market by any route controls the rates by all the other routes. This principle is well shown in the statement of the manager of the Great Western Railway of England.

"It will fairly illustrate to you," he says, "the practice with regard to some of the grain imported into this country, if I explain the position of Birmingham and South Staffordshire, which is a comparatively small district of about twelve miles square, and contains a population of upward of 1,000,000 persons, and therefore consumes large quantities of foreign as well as home-grown grain, etc.

"This district can be and is supplied from Liverpool, a distance of 98 miles; Gloucester, 53 miles; Bristol, 90 miles; Newport, 98 miles, and Cardiff, 110 miles (taking Birmingham as the place to measure to). It will be seen that Gloucester is the nearest point, and as it is connected with Birmingham and South Staffordshire by river and canal navigation, as well as by railway, the cost of conveyance of American grain is cheapest from that place, and therefore the rates from Bristol, Liverpool, Cardiff and Newport have to be fixed so as to enable these points to compete with Gloucester."

The cost of American grain is probably the same at each of these various points which may supply the market; so that the route having the longest haul can charge no more than the one having the shortest. Though they are not parallel lines, yet as they go to the same market they come directly in competition with one another.

The same rule aids in determining the rates on grain and provisions from various producing points in America to the seaboard, and the ocean rate from there to England. "The United Kingdom," we are told, "is the chief grain market of the world. All the Indian corn and about 50 per cent. of the wheat consumed in that Kingdom is from foreign countries." In this market the chief competitors of the United States are Russia, Germany, Egypt, Australia, Canada and India. From the fields of production in the United States, then, the rates are controlled by competition with the different routes to the various countries mentioned. The rate from Odessa, on the Black Sea, to Liverpool affects the rate by sea from California, as well as by rail from Dakota.

Now, if the cost of production in Dakota were the same as in Germany, for instance, and the supply in either case were sufficient to meet the demand of Great Britain, the rate from Dakota to Liverpool would be the same as the rate from the place of production in Germany to Liverpool. If it were not as low, Dakota would send no grain to that market. If, however, as is the case, the cost of production in Dakota were less than in Germany, the rate from the former place would be such as to equalize the cost of the production in the market. Now, transportation is a part of the cost of production in the market. In the place where grain or any other raw material is produced, transportation is, of course, no direct element in its cost. But at the place of production it is worthless; it must be brought to market. That from necessity involves an additional expense, and this additional expense is a part of the cost of production in the market. This fact suggests the importance and power of the markets in regulating the rates of transportation. This cost of production, other things being equal, determines who shall sell, and in what quantities. The selling price of a commodity is there determined by the competition of all sources of supply which the market has. These may be so close at hand that the transportation is an unimportant item; or may be in the place itself, in which case the transportation is no factor. To meet such competition the transportation company is compelled to fix its rates so low that the articles produced at a distance can be brought to the market at a profit to the producer.

This force of competition enters into the determination of the rates on nearly all commodities, and in nearly all places. It operates most powerfully upon those things which are consumed in the largest quantities, since for these there is the greatest demand and the greatest competition in their sale. It tends to reduce to a minimum the rates on grain, provisions and coal, and affects least the rates on silks, broadcloth and wines. It results in differential rates, which, while they cause complaint from some, are a source of the greatest benefit to the many. It produces competition between places where otherwise none exists; brings competition to commodities which before were monopolies. And so, in its effect, by constantly tending to reduce the selling price, it restricts profits more and more, and brings into stronger play the forces determining the cost of production. Hence result an action and reaction which continually tend to reduce the price of commodities to consumers.—*Gerrit L. Lansing in North American Review.*

CORN AND PORK.

Much has been said and written of late in our agricultural papers as to the amount of gross pounds of pork that can be produced from a bushel of corn fed to hogs, and among the articles published are, I think, some very extravagant statements. A writer in the *Farmer's Advance*, of Springfield, Ohio, states that he made a test trial in February, 1884, in feeding five bushels of corn to an old hog that made a gain of 96 pounds of gross pork. Taking the average price paid gross for choice heavy hogs in Cincinnati for that month, which was 7½ cents per pound, this would be equal to selling corn at $1.40 per bushel. As the farmers of Ohio are mostly engaged in mixed husbandry, it is of great importance to them to know which will pay the best profit—to sell their corn or feed it to hogs. The above mentioned experiment would settle the question beyond dispute if all feeders could make the gain stated, of 19⅕ pounds of gross pork for each bushel of corn fed to hogs.

I have been engaged in the business of raising corn and feeding hogs in the rich valley of Mill Creek, Butler county, Ohio, for over twenty-five years, feeding from 100 to 400 head each year, and have made several test trials to learn how many pounds of gross pork a bushel of corn would make. I do not claim to be an expert in feeding hogs, yet I think in my twenty-five years' experience I have learned something of the subject, and will give your readers the result of four of my test trials.

First Trial.—I selected twenty choice Poland-China hogs, weighed them Sept. 6, 1869; the twenty hogs weighed 5,270 pounds, live weight; paid for them 9½ cents per pound, making the total cost $500.65. They were fed three times a day for 65 days, in which time they consumed 300 bushels of corn; had a plank floor to feed on, straw-stacks for shelter, and convenient to good, pure running water. They were then re-weighed, and weighed 8,425 pounds, making a gain in the 65 days' feeding of 3,155 pounds, or 157¾ pounds per hog—a daily average gain of 2.62 pounds each—which made 10½ pounds for each bushel of corn fed. Their net weight in Cincinnati was 6,993 pounds, showing a loss from gross to net weight of only 17 per cent. They were sold at 11¾ cents per pound, amounting to $821.67; deducting their original cost, $500.65, the 300 bushels of corn they ate would amount to $321.02, or $1.06⅞ per bushel. The yearly average price of corn in Cincinnati that year was 85 cents per bushel.

Second Trial.—Aug 29, 1870, I weighed 100 head of hogs of the Kentucky thin-rind stock, 16 months old, which aggregated 15,000 pounds, or an average of 150 pounds per hog. This stock is of medium size, not so large as the Poland-China, but remarkably good feeders when fully grown. They had been fed sufficient corn during the first fall and winter to keep them in good growing condition, and turned on good clover pasture the first of May, and kept there until Aug. 21 without any kind of grain. They were fed on good sound old corn till Sept. 10, and on new corn to Dec. 1, 101 days, consuming 2,200 bushels in that time, and weighed 25,484 pounds. Counting their gross gain at 5½ cents per pound, which was their home value, gives $1,401.62 for the 2,200 bushels of corn fed them, making the value of corn at home 63⅔ cents per bushel. The yearly average price of corn in Cincinnati that year was 56 cents per bushel.

In the above calculation the gross gain is valued at the home selling price, which is the correct basis for calculating the profits in feeding grain to stock; but stock to feed can, as a general rule, or should be, bought for less than the selling price when fattened and ready for market. The daily average gain of this lot was 2½ pounds, the total gain in 101 days 252$\frac{5}{10}$ pounds per hog, and for each bushel of corn fed showed a gain of 11½ pounds. This is the largest gain per bushel that I ever have made in feeding corn to hogs, but they were old and fully matured in growth of frame, and in the best possible condition for feeding. Their net weight in Cincinnati was 34,100 pounds, showing a loss from gross to net of but 16 per cent. They were sold at 6¾ cents, value $2,301.75; this gave $42.13 for their delivery at Cincinnati over the 5½ cents gross, or live weight, at home.

Third Trial.—I bought 200 bushels of corn at 65 cents per bushel, $130, selected fifty Poland-China hogs, which weighed Dec. 1, 1881, 10,655 pounds. They were fed regularly morning, noon, and evening on a plank floor, had good shelter, and the corn lasted them 24 days. At the end of that time they weighed 12,660 pounds, showing a total gain of 2,005 pounds, 40 pounds average, a daily average gain per hog of 1⅔ pounds. This gave 10 pounds of flesh for each bushel of corn fed. Now, valuing the gross gain at 6½ cents per pound at home, this trial gave but 30 cents more than the cost of the corn, to say nothing of the trouble of feeding and the risk of hogs dying.

Fourth Trial.—Jan. 1, 1883, sixteen choice spring hogs, nine months old, weighed 2,215 pounds, average 140⅜ pounds. They were fed till March 26, 87 days, in which time they consumed 138½ bushels of corn, and at the latter date weighed 3,610 pounds, a total gain of 1,365 pounds, or 85⅓ pounds per hog; daily average gain per head 1 pound; this gives 10 pounds for each bushel of corn fed. They were sold at 7½ cents per pound, live weight, which gave $102.37 for the 138½ bushels of corn, making the value of the corn per bushel at home 74¼ cents. The yearly average price of No. 2 corn in Cincinnati was 57¾ cents.

All the above trials were made on selected hogs, which had extra care, and were fed with sound corn. As a general rule, nine to ten pounds gross is fully an average gain per bushel of corn fed to full-grown hogs. A good, careful feeder, with good weather for feeding, good corn, and shelter from the cold storms, can make ten to eleven pounds' gain per bushel; but those who pay little attention to improving their stock, who seldom commence feeding till late in the fall, and then feed in the mud, with no shelter from inclement weather, cannot expect to realize over eight to ten pounds of gross pork per bushel of corn even on old hogs, and on young ones less, as all my experience has proven.

From the examples given above, and my belief that ten pounds of gross pork is a good average gain for each bushel of corn fed, I submit the following comparative values of corn and hogs: When corn is worth 40 cents per bushel, the price of hogs, live weight, should be 4½ cents per pound; corn at 50 cents, hogs should sell at 5¼ cents; corn at 60 cents, hogs should be 6¼ cents; corn at 70 cents, hogs should be 7¼ cents; corn at 80 cents, hogs should sell at 8¼ cents. This does not make any allowance for hogs dying.—*Joseph Allen in Cincinnati Price Current.*

LARGE EXPORTATION OF OATS.

Ordinarily only a small quantity of oats is annually exported from this country, but during the past few weeks a very large demand, comparatively speaking, has sprung up, the shipments for the four weeks ended June 20 amounting to 965,002 bushels, mostly for Antwerp, and, notwithstanding our large receipts, the stock here has been steadily reduced. It is also to be noted that the Continent is taking a much larger quantity of Indian corn from us than usual, the exports since Sept. 1, 1883, having been some 8,300,000 bushels against about 5,700,000 during the corresponding period in the previous season.—*N. Y. Produce Exchange Reporter.*

A SUGGESTION.—"It's no use, Mary," he said, as he got off the train at the station in New Jersey, and found his wife waiting to drive him home to the farm.

"What's happened?"

"Why, down in York the bulls are predicting a big wheat crop."

"Well, isn't that what we hope for?"

"Yes but the bears say that England won't buy a bushel of us this fall."

"Oh, well, Samuel, I shouldn't worry over it," she said, as she surrendered the lines. "If wheat is big and prices low we'll make up for it on the cider. You know we can water that almost half, and sell all we can make."—*Wall Street News.*

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FEED MILLS IN ELEVATORS.

One of the sources of profit open to the elevator owner is the feed and corn mill. Grain dealers are prone to go into the coal and stock business for obvious reasons; and it is usually from the actual wants of his community that he goes to grinding feed or making corn meal. The elevator usually precedes the flour mill, and in fact is often expanded into one. Every elevator is the center, so to speak, of a country where there must needs be stock, and in some such localities the demand for feed for such purposes is enormous. The elevator man occupies a close relationship with farmers and others, and to him the business of supplying this demand falls, unless the miller, if there be one, absorbs it. The cost of an outfit for grinding feed alone is small; and in communities where the demand is large a feed mill will pay for itself in a short time. So when there is a demand for corn meal, the cost of a corn mill and bolt is soon returned to the enterprising man. Neither arrangement need interfere with the regular business of the elevator; while the space devoted to it in the house is limited. If the locality is suitable there may not be a fortnne, but there is a good profit in grinding feed and corn meal; a good enough profit to deserve investigation by elevator men who are without such an arrangement.

IRON CLAD HOUSES.

The interior fire hazard of grain elevators ought not to be large. Most of the machinery runs at a comparatively low rate of motion, nor, except in the case of large central elevators, is there any complexity about the machinery, or very much of it. Of course, in any building where there is running machinery, the fire hazard is largely proportioned to the quantity of machinery in motion; and in ordinary elevators this is small. And when we consider the large number of elevators in the country and make allowance for those which are untenanted or unproductive (unproductive property is always extra-hazardous because less care and precaution are taken with it) the number of elevators burned must be reckoned as small.

The fact is that a large proportion of elevator fires arise from outside sources. The necessary location of grain houses on railroad tracks, as we have remarked before, introduces the hazard from locomotive sparks. Then again, proximity to manufacturing establishments, when there is such proximity, adds another hazard of the same character. The remedy against outside hazards of this kind is found in making the building fire-proof from the outside, so that sparks or flames from without will find nothing to feed them. The cost of doing this with either a new or old house is not large; and with good, valuable property, is a sensible precaution to take. The growth of the sentiment in favor of taking such precautionary measures against outside fire hazard is instanced by the number of firms making and selling fire-proof roofing and siding, with the names of many of which our readers must have grown familiar; and a ride through the country will reveal that elevator owners have not been backward in setting and followiag the example of adopting these measures, not only as a precaution against fire, but also, especially as regards roofing, in securing permanency.

KEEP POSTED.

If common business prudence should not dictate it, the number of suits at law growing out of transactions in the sale and shipment of grain should impel every elevator owner and grain shipper to fully post himself in the precepts of commercial law and to keep posted on judicial decisions in knotty and difficult cases. Questions relating to the ownership of grain in store, the liability of common carriers like the railways, insurance, shipments on consignment, and the like, are constantly coming up, showing not only looseness on the part of many engaged in doing business, but the complex legal nature of the grain buyer's business. Of course the business man cannot be a lawyer; but he can easily acquaint himself with the leading principles of commercial law. So far as we are concerned, we intend, in the future, as in the past, to make commercial law, especially as applied to the business of elevator men, a leading feature of this paper. No one could keep track of the multitude of judicial decisions, nor would one be expected to memorize them; but the fact is that they generally contain in a nutshell the precepts governing cases at law, and in no way can the business man so easily familiarize himself with commercial law as by their perusal.

"FUTURE TRADING."

A correspondent of the Cincinnati *Price Current*, from New York City, signing himself John Cinnamon, commisson merchant, speaks of a large amount of that said and written about business speculation as pure "nonsense." Future delivery contracts are decried; and small discrimination is made between the legitimate and merely speculative, or gambling transactions. The writer proceeds to show, as has been repeatedly done in our columns, the necessity of these contracts to sell and deliver products at future periods, and their offsets of purchases that will secure the dealer against ordinary contingencies. To keep himself safe, the shipper must have sold as many contracts as he has purchased, when he begins to deliver, and *vice versa*, he must have bought all that he has contracted to deliver; and these purchases involve a large number of persons usually through whose hands the product may have to pass from the producer to the shipper. This constitutes those contingencies which demand great sagacity on the part of the shipper or dealer. Speaking for the Produce Exchange, of New York City, the writer says that one party cannot possibly, when any article is scarce, and is also necessary as a medium of trade in future options, or in the conduct of the domestic or export business whose free and general possession is required by public welfare, be allowed to acquire and hold out of market all the stock of such article, in order to force buyers to pay for it an exorbitant price. The Exchange would not, he says, permit it; and if discovered, the members would put up their margins and refuse to trade with those would-be tyrants, publicly excepting them from their dealings. The making and working a "corner," says John Cinnamon, cannot be hidden; the actor must show his hand. Laws of restraint on this matter are, he says, easily made in the Exchange, that will not abridge any man's just liberty. A party who aids in working a "corner" is an enemy to the public, the commonwealth, and his trade associates. The motive and effect of holding back large amounts of products in times of plenty, although it may be carried to the extent of exorbitant demands and prove of considerable injury to the public, is quite a different affair. The products of the earth ought to be used in their season; and the export surplus should be in the great store-house ports in ample time. This experience shows in the end, pays best all parties interested, from the field to the consumer, and the practical results of this truth must teach its lesson and work the cure of that evil which springs mainly from mistaken judgment and unwise action.

THE THIRD YEAR.

With this issue we enter upon the third year of the publication of the AMERICAN ELEVATOR AND GRAIN TRADE. Our purpose, as announced at the time, was not to interfere with any other paper published, but to cover a field which was not then occupied, and give to grain men a paper differing in plan from the excellent papers already known, which are occupied chiefly in crop statistics and prices. A monthly journal could hardly render itself valuable on such a plan, and yet we believed there was an ample field for a paper which would possess more the character of a magazine, and be an index to the trade, especially of trade appliances. Nor have we been disappointed in the outcome. It has been our aim to supply the reader with an interesting journal, and the advertiser with a valuable medium; and we believe our aim has not fallen short. For the future we promise a constantly increasing standard of excellence. We have no ulterior purposes to subserve in the publication of this journal, and shall be pleased to consider all suggestions that our readers and patrons may offer. And we may here acknowledge that we are indebted to our constituency not only for their support, but also for their equally valuable practical suggestions for the improvement of this paper One of our chief encouragements has been the evident interest which our readers have taken in the improvement of the paper; and this interest we trust will not be withdrawn. Our patrons and readers have the assurance that if earnest endeavor will earn it, we shall try to merit their continued good will.

THE LAST WHEAT CROP AND RESERVES.

The New York *Produce Exchange Reporter*, of June 28, considers that the recent returns confirm its early estimates of the wheat crop of 1883. The exports from all the United States ports for the eleven months ended May 31, of 1883 and 1884, were respectively 139,061,153, and 100,126,137 bushels, a decrease of 38,935,036, of which that of flour was equivalent to about 2,300,000 bushels, showing that the manufactured product has maintained its position better than the raw material, which speaks well for the milling enterprise of our country. It may also be noted that there was a much larger quantity of wheat in this country on May 31, last year, than at the same date of this. With the large reduction in the exports as shown, this is pretty good evidence that the crop of 1883 was not over-estimated. The crop of 1882 was 504,000,000 bushels, and that of 1883 was generally estimated at less than 400,000,000 bushels. There were exported in the year ended June 30, 1883, 145,650,000 bushels, from small reserves, and the large crop as above stated. Judging from the lightness of the June exports, not more than 105,000,000 bushels, it is estimated will be got off in the current fiscal year, a decrease of 40,000,000 bushels from last year. Deducting from the deficiency of the crop of 1883, the 50,000,000 bushels brought forward from the crop of 1882, there would be 54,000,000 bushels less for export this year than last, provided the stocks were run as low on June 30, this year, as at the same date in 1882, and home consumption were no greater. But the decline in exports will only amount to 40,000,000 bushels, and the difference, 14,000,000 bushels, may be not quite so great an exhaustion of supplies as in 1882, if as estimated, the crop of 1883 amounted to 400,000,000 bushels.

Editorial Mention.

THIS is a good time to put your house in order, at least as good as any that will occur.

THERE have been troubles recently in Chicago, with striking trimmers on the grain vessels.

THE cry of "musty" corn comes from New York. The amounts, however, posted as such, are comparatively trifling.

A NUMBER of openings are offered in our column "For Sale" which parties wishing to locate might investigate to advantage.

PARTIES having elevator property for sale, or wishing to purchase or rent such property, will find it to their advantage to advertise in our columns.

THE inquisitive reader will, we think, find a sufficiently wide diversity of matter in the present issue for all practical (and theoretical) purposes.

IF you know of any new houses going up in your vicinity, or of any changes being made in old ones, send us the particulars. We wish our news columns to be as complete as possible.

THIS number commences our new volume, Vol III, and you cannot invest a dollar to better advantage (unless you have already subscribed) than by sending it to us, and getting the paper for a year.

ILLINOIS wheat promises to yield well. The crop now being harvested will be about 96 per cent. of an average crop. California will be the banner wheat state this year, but Illinois will still fly the pennant for corn.

A FARMER in Western New York still holds 1,500 bushels of his wheat crop of 1882. A year ago he could have sold it for $1.25; now he is offered something like $1.10. He is not getting rich very rapidly on that crop.

ABOUT all the first-cass machines that are ever used in elevators are advertised in our columns. If you want any sort of machine, write to those whose cards appear in this issue, as they are all well-known firms with reputations.

THERE seem to be no indications that the late panic was more than skin-deep. It was a rich man's panic, and the world and trade ought in the end to be the better for it. One result, however, has been to arrest enterprise in some degree, and make money tight.

ONE thing that the country needs is a political party that will guarantee a good crop, cheap transportation rates, and good prices abroad. Some Frenchman has said that the French peasants will not support any government that will not guarantee good crops.

THE Canadian Government, it is now understood, does not intend to remove the tolls from the canals, but will deepen the Welland and St. Lawrence to a uniform depth of fifteen feet. A loan will, it is said, have to be obtained from England for this purpose.

MESSRS. N. J. STRATTON & Co., of Maryville, Mo., extensive elevator owners and grain buyers at over a score of poiuts in Iowa and Missouri, write us: "To say that we are well pleased with your monthly but poorly expresses our appreciation of it. Success to you."

THE HARRINGTON & KING PERFORATING Co., 43 to 51 South Jefferson St., Chicago, have been introducing numerous improvements into their works. They have been enjoying an excellent trade. They furnish perforated sheet metals for every known purpose, and if you need anything in that line for your establishment they can furnish it you. Mr. Harrington, of the firm, was identified with the industry of perforating sheet metals from its commencement, and customers profit by his extended experience.

THE FROST MNFG. Co., of Galesburg, Ill., report a very brisk trade in their line of goods. We note among their late sales that one firm has purchased a third outfit, which leads us to suspect that this well-known firm is anything but frigid in its treatment of customers.

IRON FRAME MILLS, for the use of elevators and warehouses, are brought to the reader's attention in this issue by the Portable Iron Roller Mill Co., 103, 105 & 107 W. Monroe St., Chicago. The prices are cheap, and the mills are warranted durable and efficient, while at the same time they require no burr dressing.

MESSRS. C. T. BARNES & Co., of 337 W. Monroe St., this city, manufacturers of the "Improved Chicago Car Mover," report a large number of sales to many different points in the country, including sales to numerous elevators. This appliance is strongly constructed, and its rapid introduction can only be accounted for on the supposition that it gives universal satisfaction.

MR. E. B. GRYMES, who for two years was Grain Inspector at Richmond, Va., under the Richmond Grain and Cotton Exchange, resigned a short time since, in order to take charge of the Richmond Elevator as manager, and Mr. H. D. Riddick, formerly his assistant, was appointed to fill the vacancy. Mr. Grymes has our best wishes in his new and important position, for the duties of which he is well qualified.

A PROPOSITION was laid before the Chicago City Council a few days since, by one of the aldermen, to permanently close the bridges over Chicago River at the end of the navigation season, 1886. If such a proposition were carried out, the damages to be paid by the city to the owners of the twenty-five elevators along the river would be enormous, not to mention the loss to dock and wharf property.

A NEAT and very convenient little appliance is advertised in this issue by Messrs. Montgomery & Co., 105 Fulton Street, New York. This is Church's Patent Improved Double Speed Indicator. The price of the double indicator is only $1.50 and it indicates the revolutions the shaft is making either right or left. It will be seen from their card that they deal in a number of useful tools in which the reader may have an interest.

MR. JOHN O. FOERING, Chief Inspector of the Grain Inspection Department of the Commercial Exchange of Philadelphia, writes: "I always welcome the receipt of your journal with pleasure, and can see a marked improvement in each number. I inclose $1 for the third volume, and take much pleasure in recommending your paper to the elevator and grain trade generally." Mr. Foering has more than once placed us under obligations for favors, none of which, however, are so valued by us as his good opinion of the AMERICAN ELEVATOR AND GRAIN TRADE.

An Iowa contemporary says that no interstate regulations, however stringent, will practically solve the transportation problems. No legislative regulations can sufficiently cheapen the transportation of bulky articles to a successful competition with the condensed manufactured product. As illustrative of this thesis, these facts are presented: The States of Kansas and Nebraska have exported a large amount of corn during the past year, amounting, as estimated, to 137,000,000 bushels. The freight charges, during this time on the C. B. & Q. R. R. were 20 cents per 100 pounds from Kansas City to Chicago; from Omaha 25 cents, and a fair average estimate would be 35 cents. This would make the cost of the above amount of corn to Chicago $26,852,000, and to New York one-half as much more. Now converting this corn into pork, calculating one bushel to ten pounds, there would have been 1,370,000,000 pounds, making 68,500 car-loads which, at $70 per car, the price from Omaha, would be $4,795,000, showing a saving in transportation to the producers in these states of over $22,000,000. The exact figures, the writer thinks, would considerably increase this difference. This is not a question merely for the states mentioned, but involves a great economic principle, universally applicable among farmers and farm owners.

The State Department of the general government presents estimates of the foreign supply and demand for grain, etc., the present year, based on consular reports for several years past. From these sources it is estimated that the wheat importing countries will require 375,250,000 bushels, of which the United States will be called upon to furnish 188,151,000. The total wheat acreage of this country is placed at 38,500,000 bushels, which, at an average yield of thirteen bushels per acre, will produce 500,000,000 bushels. This will be ample to supply our home wants and furnish our required proportion for foreign demand. Our prospects for a good wheat crop are excellent; and if the department's estimates prove true, fair if not high prices may be expected.

THE *Milling World*, of Buffalo, N. Y., finds itself puzzled to fix the exact line between legitimate trading and swindling. It was recently stated in the daily press of Chicago that a part of the internal machinery of trade consisted in sending telegraphic dispatches from Buffalo to Chicago, to the effect that the elevator warfare at the former port had resulted in the abolition of their charges. Slight and unreasonable as a basis of action as was this rumor, quite a number of vessels at Chicago accepted thereupon 1½ cents freight on corn to Buffalo. Before the fleet arrived, however, another dispatch stated that the war was over, and that the elevator charges had been resumed. Whatever the ground was for these dispatches, such methods must be classed among swindling "tricks," disastrous to the confidence and stability of legitimate trade.

THE ELEVATOR BUCKET.

We suppose it has occurred to every one who has watched the operations of a grain elevator or a flouring mill, that the invention and adoption of the elevator bucket was a tremendous advantage to the world at large and the handlers of grain and flour in particular. How we should dispense with the elevator bucket and the conveyor now, after nearly a century of their use, would be a problem. If one will pause a moment he will see the important part they play in the handling and transportation of the crop, and how many weary human hands and weary backs they supplant by taking up their burdens. Man, truly is a "noble animal" when he can pack his own burdens on to inanimate, nerveless, machinery.

Common report assigns the invention of the elevator bucket along with the conveyor, to Oliver Evans; but it is a mooted question whether the elevator bucket at least did not exist before him. Indeed, it has been claimed that all he did was to harness the elevator stand to the water wheel, making it automatic, these claimants saying that the elevator bucket on an endless belt had existed long before. At any rate, such was the perversity of man in general and millers in particular that Evans had a hard time persuading people that it was better to elevate grain and flour by means of buckets than to "tote" it on the back or elevate it by means of tub and windlass. But most of the world came around gradually to see that the elevator bucket and the automatic handling of grain and flour was a vast step forward, though to this day there are places in Europe where primitive means of grain handling are resorted to.

Some of the early elevator buckets were "cautions" to look upon. We have a collection of them. Some are made of rawhide alone, while others are made of rawhide with copper rivets. There is a leather specimen, and one made from

[illegible]. There is a vast difference between these [illegible] of the olden time and those of to-day. [illegible] the work of making elevator buckets was [illegible] the mill wright, while now the manufact[illegible] of them from iron, steel, etc., absorbs the [illegible] of several large establishments, and their [illegible] figures are covered by patents. So, too, [illegible] machinery has been designed for their [illegible], till, as is invariably the case, has [illegible] greatly cheapening their cost, both to [illegible] and the user. The elevator [illegible] is one of the biggest little things used, and its employment is widening every year.

GOVERNMENT AND TRANSPORTATION.

It has long since practically ceased to be an [illegible] whether government may legiti[illegible] enter into the construction, or aiding [illegible], of transportation facilities that are valu[illegible] to such an extent as to be of nation[illegible]. A few radical doctrainaires may [illegible] that the now clearly seen wasteful public [illegible] and land grants made in aid of the [illegible] railways, resulting in phenome[illegible] individuals and corporations that [illegible] of monopoly, and have tainted the [illegible] of many of our distinguished legisla[illegible], with exception, of which the Credit Mobilier [illegible] is a standing type, that all this proves that in no [illegible] is it the legitimate sphere of government [illegible]. But the almost overwhelming consensus [illegible] compels the conclusion, who be[illegible] in spite of all that is now seen as objection[illegible] and large [illegible] necessary in these expenditures [illegible] the grand results that have sprung there[illegible] in opening those vast fields of exhaustless [illegible] resources, turning the "Great Ameri[illegible] Desert" into a fruitful region, rapidly filling [illegible] with the bone and sinew, and the intense en[illegible] of Western emigration has been, even thus, [illegible] purchased. How many years would have [illegible] to pass before private capital, always timid [illegible] to mutual returns, would have thrown these [illegible] open to the commerce of the [illegible], time [illegible] wise when Lincoln's "hind [illegible]" is at their command, do not tell us.

The government of conservative England entertains gravely the question of giving aid to [illegible] internal water-ways, although she [illegible] only an island on the sea, on which she has un[illegible] expended her public funds by the mil[illegible]. We are fully informed also of the $50,-[illegible] that the Dominion government, with a [illegible] not larger than that of the state of [illegible], has bestowed on her canals, rivers and [illegible]. If not as yet as productive [illegible] as was hoped for, it is because nature [illegible] favored her as she has her great [illegible] rival; while still undiscouraged she in[illegible] on in the same course until she can [illegible] deep, uniform channel from the [illegible] of the great lakes to the sea-board, [illegible] accommodate large steam vessels and [illegible] laden with grain, that can thus be eco[illegible] started on its ocean voyage. With this stirring example, why should there have been a moment's hesitation on the part of our Congress in starting forward an enterprise that has been indorsed by the statesmen of all parties, both South and North, for years, connecting by a ship canal the Father of Waters with the Great Lakes?

But a matter of equal, perhaps more, importance, is now being urged upon Congress, upon which it would seem there could be, so far as the principle is concerned, but one opinion, viz., the regulation of inter-state commerce by the general government. This has been so thoroughly discussed by our public papers, etc., as to what is intended, and especially what is not asked for as to unwise specific legislation, that "a wayfaring man, though a fool, could not err therein." Whatever may be thought of the self styled "laboring man's friend," the invincible Ben Butler, few will deny the sterling practical common sense of the words he uttered on this topic at the recent Democratic Convention in this city. This is in no sense a partisan question, and falls far short admittedly of reaching the limits of the government control of matters, so far left to the states. The strongest objection that has been offered is, in effect, that it would be a fruitless measure. This, as well as the now rather stale and meaningless one, that it would be only a part of the political machinery, has been made over and over again as to measures that, after they were once tried, proved of such value that no influence could again bring back the original condition of affairs. Gentlemen legislators, we, the representatives of the immense class of producers, and dealers in cereals, etc., ask you to give this measure a trial; if proven useless or harmful, it can easily be removed; but this will not be; only, perhaps, to supersede tentative legislation by the wisdom of practical experience on the same line.

INDIAN AND AUSTRALIAN WHEAT.

Mr. C. Kirchoff, in an article in the *Millstone* on "Australian and Indian wheat," reviews the subject, both in relation to the mutual effect as the wheat traffic of these two countries, and as general factors in competition with our own grain traffic. The Melbourne press are ventilating the facts, fully known here, as to the action of the Government of India in increasing the facilities of transportation and agriculture there with considerable evidence of alarm at the effects on their own competition in the trade. The writer says that Victoria is the only Australian colony that clings to an ultra-protection policy, refusing to confederate with the others in a policy of free trade. The reports from San Francisco, of the wheat crop, dated April 24, state that the official report is less than the previous estimates. The average reported was eight bushels per acre. The Victoria agricultural returns are better and report an aggregate of about 15,490,000 bushels, an increase of about 6,750,000 over the previous crop. The yield of barley was over 1,060,000, and of oats over 4,735,000 bushels. The wheat yield was 14.09 against 9.03 bushels per acre in 1883. A cable dispatch adds that the total export of wheat from South Australia alone will be 11,000,-000 bushels. If these figures are reliable, says the writer, they show, with such increase in one year, that Australia promises to become a formidable wheat-exporting competitor of India and America, and does not sustain the common English view that India is yet to engross the whole supply of wheat there required.

In the last ten years the American grain trade, which then had only Russia as a competitor, has met these formidable and increasingly potent rivals. India, previous to that time, had sent 600,000 bushels of wheat to England annually; this had increased to 44,000,000 in 1883, or nearly half the British imports. This wheat has taken high rank in France, Italy and Belgium, bidding fair to outbid the Russia grain. The total requirements of Europe, from the coming harvest, are estimated at 218,000,000 bushels; of which Russia is expected to supply 56,000,000; India 44,000,000; while the American supply is estimated at 92,000,000 bushels, a little more than double that of India. The author looks upon these facts as showing an increasing, steady competition from that vast territory, that will be severe and long. This will call for better seed, better methods of culture, finer results, and increased and cheapened transportation facilities.

The English and French are making use of a very light system of railway with a gauge of from 24 to 30 inches, which can be laid down at a cost of from $1,000 to $1,200 per mile, and is used largely south of the equator. This has been introduced on the sugar plantations of Queensland, and by private enterprise into India.

In our own country, with a people and resources such as ours, enterprise and energy have so far conquered, in the fields of agriculture, milling, and largely in manufactures generally, and it is to be hoped that we are not now to succumb to India with all the fine qualities of her wheat as tested by the McDougall Bros. & Co. The writer urges, pointing to our satisfactory experience thus far, that we should aim principally to increase our exports of the manufactured products.

Mr. G. M. Kinghorn, of the Montreal Transportation Co., thinks that the concessions made by the Government and Harbor Commission, though coming late, will produce very favorable results. An earlier action would have aided sooner in the competition with the Erie route, but the full benefits will not be felt until the fall grain seeks an outlet to the seaboard. Still, the reduction is very satisfactory, he says, in its effects. The activity of the European grain trade is too slight to warrant steamships coming to Montreal for grain cargoes. Those that now come are for the import trade, and the grain which is taken back has been either as ballast, free, or at ruinously low freights. Since the above change, however, all vessels have received full cargoes, that at least pay the cost of handling, and in most cases give a light profit to the owners. Low dues, he said, were drawing grain to the St. Lawrence route not immediately required by the trade, and in every barge-tow some grain is brought down. Other grain men and forwarders are rather more discouraged than sanguine, and do not take so favorable a view of the future. The manager of the Kingston and Montreal Forwarding Co. said that they had about fifteen barges engaged in the coal trade, between Kingston and Montreal, and only ten are in the grain transportation business. The Montreal Transportation Co.'s business is in about the same state, with about fifteen barges in the grain traffic. The shipments, to and from this port, have been much smaller than last year. Since May 28, when these reductions took effect, the Montreal shipments of wheat and corn have been respectively, 652,010 and 686,164 bushels.

A QUESTION OF CORNERS.

Our valued contemporary, the Cincinnati *Price Current*, in its issue for last week, has some very sensible remarks upon the subject of corners. It does not uphold or indorse them, it does not believe they are, in their effects upon commerce, beneficial, but it does hold that if the man who gets "squeezed" could squeeze the squeezer, he would not hesitate to do it, but would set joyfully about it, and with much complacency boast among his friends of the shrewdness he had displayed. All of which is true, and points a good-sized moral. There is no question that the possibility which exists of cornering grain and provisions is detrimental to legitimate business, and so well is this recognized that many plans have been proposed to limit, if not entirely do away with, such possibility. The majority of these plans propose the intervention of legislative action, and perhaps such intervention is the only means which would tend to check or limit the admitted evil, but of its entire efficacy we have very serious doubts. It is also questionable if proper and efficient legislation could be had. The passion for gambling seems to be innate to the human race; even our churches, a majority of them, encourage it in mild forms. The simple fact that there is a risk attending it appears to lend it a zest which renders it impossible of suppression. The boy plays marbles "for keeps;" the deacon "takes a whack" at the "grab-bag;" the poor man buys a lottery ticket; the young man in regions of rusticity recklessly hazards his lucre on a "hoss race;" the young man in the city buys combinations on base ball, or margins in oil or wheat, and the kings of "the street" manipulate stocks, grain and provisions. And why? Simply for personal gain. No thought is given, apparently, to the fact that some one loses the money, or property, another gains. There is no compensation, nothing that could, by the wildest stretch of fancy, be deemed an equivalent given the loser. He who is successful in engineering a corner upholds the propriety of it; he who is unsuccessful in breaking it, has little trouble in finding good reasons for denouncing that state of business morals which permits such practices to exist. The successful "squeezer" never "squeals."

Sympathy for the misfortunes of him who attempts to advance or depress the prices of food commodities for gain is out of place, and utterly uncalled for. The effect of combinations to control supplies and regulate values of such commodities is, not infrequently, decidedly damaging and injurious to legitimate commercial pursuits, but what can be done to prevent them? The question is one of serious import, and is yearly assuming greater importance. The stagnation in the general business of this country to-day is in a large measure directly traceable to the combinations formed last year to regulate wheat values, and which succeeded so well in their attempts at regulation that our exports of wheat for the eleven months ended May 31 last were less by 40,000,000 bushels than for a similar period the previous year; or, to put it in dollars and cents, an actual loss of more than $45,000,000. Granted that our wheat last year was inferior in quality and deficient in quantity as compared with the crop of 1882, the fact still remains that much more would have been taken than has been were it not for the clique which upheld prices beyond the point at which foreign countries could obtain their supplies from various other sources.—*Milling World.*

THE NEW PRODUCE EXCHANGE AT SAN FRANCISCO.

The opening of the new Produce Exchange yesterday was an event of very considerable import in various ways. It demonstrated the growth of the business relations of exporters and producers in the agricultural field more strikingly than any mere verbal statement could possibly do. The Produce Exchange, as it was well said by one of the speakers at the banquet, brought the producer and consumer into direct relationship by finding a market for the surplus crop. Without its intermediate agency this would hardly be possible on any large scale, because a farmer cannot very well be an exporter as well as a producer. He must trust to the commercial enterprise and organizing skill of the members of such institutions as the Produce Exchange to find an outlet for him; in other words, to create a home demand which will bring the shipping of the world to his door, as it were, to carry his wheat surplus to the millions of consumers waiting its arrival in Europe. There have been exceptions in this matter. For example, the late Dr. Glenn exported his own wheat, loading eleven ships with grain from his Colusa ranch one season, but the magnitude of his farm operations rendered possible as well as profitable to him what would not be profitable were it possible to the average of California wheat-growers. We are pleased to see the Produce Exchange in its new and central quarters, and we regard the change as the beginning of a more prosperous career for that organization.—*Post.*

RAIL AND LAKE GRAIN RATES.

The railroads this year have carried more than half of the whole East-bound grain shipments, and very much more than in the other years, says the *Railroad Gazette.* The river shipments seem not to have been affected by the low rail rates, for they were as large a proportion of the whole as last year, and they have never since the railroad war of 1881 risen to the proportion that they were just before it. The large proportion carried by the railroads in 1882 was due to the fact that the total shipments were then very small, and were mostly required for interior consumption, and so could only be distributed by the railroads. The amount carried by them then was much less than in the other years.

The rail rate this year was 15 cents, against 25 cents in 1883 and 1882, and a nominal rate of 30 cents in 1881, which was so poorly maintained that it was probably equivalent to a rate of 25 cents.

We may assume, then, that, as the average total weekly shipments were nearly the same this year as last, the changes in the amounts going by lake and rail have been due to the difference of 10 cents per 100 pounds in the rail rate—that, if the rate had been 25 cents this year the railroads would have carried but 1,710,000 bushels of grain, instead of 2,505,000, and that the lake vessels would have carried 2,910,000 against 2,116,000. Now, as the railroads received about $203,000 a week for carrying the 2,505,000 bushels, and at 25 cents would have received about $231,000 for carrying 1,710,000 bushels; and as it cost something more to carry the larger quantity, it is evident that they would have done better to have let the lake vessels get the grain which the low rail rate diverted from them.

THE PANAMA CANAL.

Lieut. R. M. G. Brown, of the navy, who recently joined the Lackawanna in the Pacific station, has made a long and interesting report to the Secretary of the Navy on the condition of and progress of work on the Panama canal, under date of Callao, June 2, says the Washington *National Republican.* The original estimated cost of the work was 600,000,000 francs, and the time required for its completion seven years. Nearly half of that time has already elapsed, and as near as he can find out, Lieut. Brown says not far short of $60,000,000 have been expended, exclusive of the $20,000,000 expended for the Panama Railway. According to the officials of the canal company, 5,000,000 cubic meters had been excavated prior to May 1, and the total excavation necessary is estimated at 75,000,000 cubic meters. Lieut. Brown thinks not more than 4,000 000 cubic meters have been excavated effectively, and that only about one-thirtieth of the actual work necessary has been accomplished.

Much of the material and machinery, which it is alleged has been purchased at extravagant prices, has been found useless. It was stated that material costing $15,000,000 had been allowed to sink into the soft marsh, and was finally covered up, and that other material had already been condemned and sold to vessels for ballast. An epidemic of yellow fever is anticipated, and hospitals erected at a cost of $3,000,000 are entirely inadequate. The greatest obstacle to the completion of the work is the river Chagres, a sluggish stream in the dry season, but which becomes a torrent almost uncontrollable during the end of the wet season. During the great flood of November, 1879, the railroad was covered with water nearly eighteen feet deep from Calen to Emperador, over thirty miles. Another such flood would in a few hours undo much of the work between Calen and Emperador.

Lieut. Brown considers the completion of the canal, according to present plans, as very doubtful, as it certainly will require much more time and money than was originally estimated. He thinks that a canal with locks would be more feasible, but that its net profits would be much less. Unless the French government becomes interested in the canal, the failure of the present corporation need not excite surprise, on the presumption that no other government would assist the present management. It appears to him that the French government has other uses more national in which to expend any probable surplus of revenue.

BARLEY.

There is more barley consumed in the United States every year than is raised. The imports and exports for the past ten fiscal years bring out this fact very prominently:

	Imports.	Exports
1873-74 bushels	4,891,200	320,500
1874-75 "	6,255,100	91,000
1875-76 "	10,286,000	317,800
1876-77 "	6,703,000	1,186,100
1877-78 "	6,764,200	3,921,500
1878-79 "	5,721,000	715,500
1879-80 "	7,135,300	1,128,900
1880-81 "	9,528,600	885,200
1881-82 "	12,182,700	205,900
1882-83 "	10,050,700	433,000
Total	79,317,800	9,155,400

Thus within the past ten years we have used 170,000,000 bushels of barley in excess of what we have produced. The barley is mainly imported from Canada. The cost of the 79,317,800 bushels of barley imported into the United States in the past ten years is $64,429,700, or a little over 80 cents per bushel of 48 pounds.

A GREAT BARLEY MARKET.

The annual report of the Milwaukee Chamber of Commerce, for the fiscal year ending May 30, shows an increase in the aggregate receipts of grain of 3,500,000 bushels, strengthening the belief expressed in the Secretary's last report, that the year 1882 probably witnessed a lower record than will be known in the future wheat trade of Milwaukee. The total receipts of wheat were 9,278,922 bushels, and of all kinds of grain 21,892,332 bushels. The receipts of barley show a marked increase over all previous years, showing a total nearly of 7,000,000 bushels, of which about one-third was consumed by local brewers. Milwaukee is now the leading barley market west of New York. The apparently large receipts of Chicago—8,831,899 bushels—in 1883 included over 3,000,000 bushels of Milwaukee receipts shipped East and South by rail.

THE WAR AGAINST AMERICAN PRODUCTS.

It is evident that members of the Produce Exchange connected with the grain trade, are not inclined to regard with anything like seriousness the cablegram from Berlin, announcing that it is proposed to place an import duty on American cereals landed in Germany; not that it was a jest for the agricultural representatives in the Reichstag, would, no doubt, think the imposition of the suggested duty just the proper thing, but that it would be obviously impolitic. In view of the somewhat resentful feelings which Mr. Sargent's manly course in respect to the embargo on American hog products conjured up, feelings that have been intensified by the delay in accrediting a successor, the spiteful legislation suggested would be no doubt palatable to many members of the German Parliament, other than those who would increase their political capital with the farmers, but for any effect the proposed tax would have on prices of bread, the inhabitants of cities, the mechanics of the capital and the provinces, would have to be reckoned with. The tax, too, as a discriminative one, would not fail to lead to reprisals that would be sanctioned by our great political parties in the shape of increased duties on articles of German importation into this country. A bill of this kind may be talked about, but is not likely to be seriously entertained. In itself, commercially speaking, the tax would be to us a matter of slight importance; it is the unfriendly spout which the fact of such a proposal having been entertained exhibits, that most engages attention.—*New York Produce Exchange Reporter.*

AN ELEVATOR HAND BECOMES A COMMISSION MERCHANT.

Says the Milwaukee *Wisconsin:* "Robert Lindblom of Chicago, has been in Milwaukee for several days past renewing old-time acquaintances. Mr. Lindblom is one of the most celebrated commission men in the Northwest. He is in many respects a most remarkable man. Lindblom is a plain, unpretentious Scandinavian, about 40 years of age. He is a little over medium height, tolerably slight, and as straight as an arrow. He bears his age well, and does not look to be more than twenty-eight or thirty years old. His personal appearance is peculiar, and he would attract notice in a crowd of thousands. It was amusing to hear people ask: 'Who is that stranger with the soft white hat?' when Mr. Lindblom walked around on 'Change yesterday. He has lately shaved off his straggling, tawdry beard, and now wears only a very small and very light moustache. He wears glasses, and there appears to be something the matter with his left eye. Mr. Lindblom wore a short blue coat, dark trousers, and a black cloth vest, when a *Wisconsin* reporter sized him up yesterday. His vest was cut low, displaying a large expanse of snowy shirt front. Three brilliant diamonds sparkling from the billowy bosom, and a limp, loose silk necktie, carelessly tied, the ends hanging six or eight inches from the collar, made the man conspicuous. His hat was a small, plain-looking, soft, white felt hat, and it was jauntily worn squarely on the top of a finely moulded head. Mr. Lindblom received considerable attention while on 'Change. It is said that he lost considerable money last year, but is still worth three hundred thousand or four hundred thousand dollars. About fourteen years ago Mr. Lindblom was an ordinary laborer in one of McGeoch & Vankirk's elevators in this city. From that humble place he worked his way up to his present important position."

PNEUMATIC TRANSPORTATION OF GRAIN.

An application was made to the commissioners of the Illinois and Michigan canal at a recent meeting by a Chicago lawyer for the right of way along the canal to La Salle for a pneumatic tube. He proposes to sink a tube in the ground five feet from the surface and run it from Chicago to La Salle, 100 miles. It is to be eighteen inches in diameter, and is to be used in shipping wheat, bundles, and other portable stuff. Commissioner Callaghan asked the applicant how the articles were to be transported; whether it was designed to make the tube a highway for mere carriers. A disgusted expression flitted over the lawyer's face as he answered: "By compressed air, of course. I shall have two engines, one at each end, and stations at Lockport, Joliet, and intermediate points."

"How fast can the bundle travel?" inquired Commissioner Brown.

"A mile a minute," answered the applicant.

"Wheat and corn will be put in in bulk and will go faster," said one.

"Well, gentlemen," said the attorney angrily, "I didn't think that I should be made the target for your wit when I came here. Will you give me the right of way or not?"

The commissioners talked over the matter and finally decided to let the attorney put down his tube provided he would pay the usual toll charged on the canal.—*Chicago News.*

MEXICAN WHEAT.

The fact that American speculators are looking toward Mexico for cheap wheat for exportation from the Southern ports of the United States, is regarded by land owners as an encouraging criterion of the value of the railroad system; which will place the farmers of Northern Mexico in a position to compete successfully with the wheat growers of California, If there be one product for which the soil of the states of New Leon, Coahuila, Durango, Chihauhua and Sinaloa is peculiarly adapted, that product is most assuredly wheat, the state of Coahuila in particular having been long renowned for the superiority of its flour. Wheat grown in Northern Mexico will generally be transported to New Orleans over the Huntington-Frisbie Railroad, which will pass through the fine agricultural state of Coahuila and connect with the Southern Pacific Railroad at Eagle Pass, Tex. The wheat product of the central states will find the cheapest outlet to the ocean by way of the port of Tampico.

BARLEY IN THE UNITED STATES.

It is a singular fact, an agricultural problem it might be said, that barley is not produced in the United States sufficient for home consumption, Yet for eleven years, from 1871 to 1881, inclusive, it yielded a larger average income per acre than any one of the six leading cereal crops. Here are the figures:—

Cereals.	Yield bus. per acre.
Corn	26.0
Wheat	12.2
Oats	27.6
Rye	13.9
Barley	22.0
Buckwheat	16.1

The greater part of the imported barley is grown in Canada, near the state of New York, where one-third of the beer of the country is made, and the short transportation makes up for the import duty. A partial explanation of these figures is, that the barley grown in this country is confined to the rich districts of the North. If the other crops named were confined to the same district, the average of some of them would also be much higher, and perhaps the profits would run higher than on barley.—*St. Louis Journal of Agriculture.*

"It was flaxseed that ruined me," he said, as he crossed his legs and heaved a sigh from the bottom of his soul.

"You tried to make a corner, eh?"

"Oh, no. I was simply calculating on the natural and average demand in the Middle states."

"And did the price go down?"

"Yes, fifteen cents per bushel."

"What was the cause?"

"Almost total lack of boils in the states of Ohio, Indiana, Michigan, and Illinois, that season," he calmly replied. "The number of boils dropped from 750,000 to three or four old carbuncles and a felon or two, and I'll be hanged if even those weren't poulticed with cornmeal to save expense."—*Wall Street News.*

GRAIN IN CHICAGO ELEVATORS.

Chicago elevators contained last Saturday evening 3,625,981 bushels of wheat 1,836,399 bushels of corn, 290,477 bushels of oats, 31,200 bushels of rye, and 32,465 bushels of barley. Total, 5,817,022 of all kinds of grain, against 8,637,528 bushels a year ago. During last week our stock decreased 1,305,058 bushels, including a decrease of 622,805 bushels of wheat and 240,143 bushels of corn. For the same date the secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 12,709,725 bushels of wheat, 5,253,157 bushels of corn, 2,669,958 bushels of oats, 268,762 bushels of rye, and 272,587 bushels of barley. These figures are less than those of a week ago by 1,709,197 in wheat and 944,571 in corn.

ELEVATORS IN MANITOBA.

Correspondence of the London *Miller:* For the last two years I have urged the establishment of an elevator system in Manitoba as a means of securing a steady market for our grain, but up to the present all that has been done in this way has been the erection of elevators at favorite railway stations by millers or individual grain buyers. This plan is not to the best interests of the farmer, as in many cases it gives a monopoly at one point for an individual buyer, and in the absence of competition the farmer has been compelled to accept whatever price was offered. I am not prepared to blame the owner of the elevator for this, as I think, as a rule, they have paid fair prices, considering the expense attending the erection and running of such buildings. I contend, however, that in order to satisfy the farmer the utmost is being paid for his products, a central storage system should be established at Winnipeg where grain could be received, and where buyers in competition would pay the utmost cent of value according to outside markets. My proposition is that a company should be formed to erect an elevator in Winnipeg having a storage capacity of 500,000 bushels, which would go far to meet the requirements of the trade for the coming season; and that this capacity should be increased as cultivation extends—the company to act only as storekeepers, handling the grain for farmer, merchant and miller alike, and as a company, having nothing to do with the grain buying or selling. I brought this matter up at a meeting of the Winnipeg Board of Trade held here recently, and showed our city merchants how necessary it was, in the interests of both the city and the province, that such an enterprise should be started. Under proper management nothing could form a safer investment, as the storage rates are the first charges on the grain; and from this alone the company would pay its dividends. I gave the preference to Winnipeg over any other point, because here the banking and insurance facilities exist to enable dealers to handle warehouse receipts. It is also the railway center of the Northwest, and has already seven lines of railway running into its depot The hold already got will be retained, and it may safely be assumed that Winnipeg will continue to be the commercial center of the territory.

The Canadian Pacific Railway Company has erected a large elevator at Port Arthur on Lake Superior, but the chief objection to that point lies in the fact that grain stored there is entirely under the control of that company, and must go out east by lake route in summer. I therefore favor Winnipeg, because from that point grain can be shipped during winter by two lines running to the south, and ere long when (as we fully believe) a route to European markets is opened up by Hudson's Bay, grain stores at Winnipeg will have the choice of three routes—north, south or east. The City Board of Trade decided unanimously in favor of the scheme, and pledged its support to any company undertaking the work. In fact, a number of our wholesale merchants signified their readiness to become shareholders to the amount of $1,000, in one case up to $2,000. A committee of the Board was appointed to take charge of the matter, and there is good hope that the enterpriee will be started at an early day.

THE PRODUCTION OF WHEAT IN INDIA.

Dr. W. W. Hunter, the Director of Statistics in India, gave the Indian Railway Committee, at a recent sitting, some graphic information regarding a great and isolated wheat-producing district in the eastern division of the Central Provinces, which the Indian Government propose to make the nucleus of five great systems of railways for supplying all the famine districts of India with grain in time of famine, and for fostering the export wheat trade in normal years. The district is known as Chattisgarh, and is 4,300 square miles in extent. It has an abundant and uniform rain-fall and an extremely fertile soil. It is so fertile that it is called by the native merchants "the land of the threshing floors." It forms a sort of meteorological horse-shoe or amphitheatre, up which the monsoom is driven by the wind, and at the northern and eastern extremities of the hills it receives a uniform supply of water every year. Only three and three-quarter millions of acres of this district is known to English officers, because the great part of the country is not under settlement, being in the hands of native chiefs. These three and three-quarter millions of acres are under cultivation, but there are, besides, close upon two millions more awaiting cultivation, one million being fine, black peat soil. At this moment there are raised in Chattisgarh 241,000 tons of grain every year, at prices so exceedingly low that when Dr. Hunter was in the district in 1877 wheat was selling in the local markets at 1s 4d per cwt., but it was so shut out from communication with all the surrounding country that in one place on the outskirts of it, but having railway communication, wheat was selling at 200 per cent. higher, and in another it was selling at 6s 8d per cwt. The chief crop of this isolated and rich district is at present rice, which is the most suitable crop for local consumption; but wheat is raised in large quantities, and would be grown in still larger quantities if there were the means of transporting it anywhere after it was produced. It is estimated that 220,000 tons of grain are produced by the peasants of Chattisgarh beyond their consumption, and the whole of that surplus is exportable, if there were only railways to carry it away. One of the proposed systems will in non-famine years carry the most of this surplus to Bombay, whence it will probably find its way to England.

In answer to Mr. Fowler, Dr. Hunter stated, in reference to the cost of producing wheat, that the Government of India had instituted a series of experiments on the subject, the result of which seemed to be that wheat could be raised with hired labor and under good supervision at something like 12s a quarter. He had also made inquiries on the subject, and these showed that wheat actually sold at a great variety of prices, and that it had certainly been sold at a profit to the cultivator, at 16s or 18s per quarter. The Government did not know how much the profit was which the cultivator got on his 16s or 18s, but they could tell that if he got 18s a quarter he would immensely increase his area of cultivation.

Mr. Fowler.—You are aware that Indian wheat is selling in England at present at about 33s or 35s per qr., and that will not leave a large margin of profit. Is it not the fact, over considerable areas, when there happens to be a large harvest, that it is not a question so much of any special price but the peasant must take what he can get?

Dr. Hunter.—Perfectly so, and it very often happens that he takes an extremely low price. It does not depend on what he has to expend on labor, because the peasant must sell his stuff, and he must take what price he can get. The experiments which the government made were made with hired labor, in order that it might have some correct basis of the cost of producing wheat. As a rule, the Indian peasant is much too poor to hire labor. The ordinary peasant spends no labor on his crop except his own.

Mr. Fowler.—Do you think there is any element of truth in the idea expressed in some quarters that, owing to the high price of wheat in England, India will be drained of her food supply, even while suffering from famine?

Dr. Hunter.—No, I do not.

Mr. Fowler.—Then you would have no objection to exportation going on, notwithstanding the price reaching a point which would cause suffering in India?

Dr. Hunter.—Exportatian would go on if prices reached a point which would cause suffering in India; but I think that exportation would be very quickly brought to a stand by these prices, if you permit me to explain. The initial cost of wheat would be 16s or 18s per qr., but the initial cost of wheat in India is only one of the many elements in the selling price of wheat in England. There are in addition the cartage, the railway rates and the sea freight. If wheat brought 22s 4d in the Jubbulpore market, it would cost 44s by the time it reached the wholesale dealer in London. But 22s in a center like Jubbulpore means 18s, perhaps, to the actual cultivator in the district in which it is grown. The famine price in India may be taken to be three-fold the average price, and the margin of profit between the buying price in India and the selling price in England is decreased by the charges which have been added to the buying price of wheat in India before that wheat reaches Liverpool. If wheat were to rise three-fold to the famine price—that is from 18s to 54s—there would be the carriage charges from the local market to England, which would enhance the price to 72s or 78s in England, and this would put an effectual stop to exportation from India.—*North British Agriculturist.*

THE ANTHRACITE MONOPOLY.

The anthracite coal trade is becoming a very close monopoly, the force of which is chiefly expended upon the cities of New York and Philadelphia, and the several towns and manufacturing industries east of the Susquehanna River. To enforce the unjust exactions made by the anthracite companies upon trade and domestic economy, there is a vast capital employed, and a relentless ring of powerful influences engaged in support of the special advantages enjoyed. There are four companies that bring annually to tidewater over two-thirds of all the coal of this quality consumed in the United States. At the head of this scheme for upholding exclusive trade advantages is the Reading Railroad Company, which centers chiefly under the hat of F. B. Gowan. With the New Jersey Central Road in the Reading control, the leaders in the monopoly are reduced to three companies. The average distance from the anthracite fields from which come the largest quality of this coal to the seaboard cities is about 150 miles; and for moving this distance this article pays a larger freight than is received for merchandise and other light goods, as a rule, on the roads throughout the country. For carrying a ton of coal 100 miles the charge upon the several roads in 1882 was: Reading, $1.55; Delaware, Lackawanna & Western, $2.31; Lehigh Valley & New Jersey Central, $1.45. The methods of accounting by these roads are different from most others in their lumping their general freight and coal tonnage in a way that makes it difficult to arrive at exact figures. But as the merchandise tonnage of these roads is light, their being embraced in the estimate does not make a difference in the amount. The average charge for freights per ton per 100 miles in the same year was: By the New York Central, 73 cents; Erie, 75 cents; and Pennsylvania, 81 cents. These roads profess to be able to carry wheat from Chicago to New York for about 45 cents per ton per 100 miles, and make a living profit.

The cost of producing anthracite coal at the mines ready to place on the cars, has been estimated by several companies for some years past at about $1.50 per ton, to which might be added ten cents for depreciation in the mine, making the net cost, ready for shipment, $1.60 per ton; to this add the average railway charge for an average distance of 150 miles, say $1.62, and the cost at the point of delivery is $3.22. From the complaints of the miners of the niggardly wages they receive, it would be supposed the lowest economy in production had been reached and was being maintained. But there are a few parasites attached to the operation which, if removed, would never reduce the cost of coal at the mouth of the mines without touching miners' wages. There is no substantial reason why coal should not be moved, at a profit to the carriers, as cheaply as grain is moved over the trunk roads, or say 50 cents per ton per 100 miles, or 75 cents for the average distance of haul. This would be a saving of at least 87 cents per ton to consumers, or a total sum on an average year's production of over $25,000,000. This sum is the oblation that manufacturers and domestic consumers lay annually as a "burnt offering" at the feet of this giant monopoly.

If there were no other evidence that a monopoly, grinding upon trade and domestic economy, was intended and was being maintained, it would become apparent from the lively interest taken in the chief of the oppressors by Mr. Vanderbilt. His acuteness for smelling out special privileges that are supported by a tax on trade is characteristic of his mental make up, the elements of which being honestly received, he has faithfully cultivated.—*Stockholder.*

THE ART OF ADVERTISING.

An English paper, speaking on the subject of advertising, says: "It is a mistake to suppose that a thing has become sufficiently well known to need no more advertising. The public has a strangely short memory. A firm which had for twenty years spent £10,000 a year in making a particular article public, tried the experiment of reducing their outlay to £5,000 per annum. But the next year it took £20,000 to restore them to their position. Enormous fortunes are amassed by those who advertise largely, judiciously, and incessantly; but all who have had exprience in the matter will confirm the statement that the latter is the one great point. It does not do to relax in exertion."

RAILWAY EARNINGS IN 1884.

The earnings of fifty leading railways for the first six months of 1884 were as follows:

Name of Road.	1884.	1883.
Burl., Cedar Rap. & Nor	$ 1,378 743	$ 1,280,838
Canadian Pacific	2,194,712	2,226,502
Central Iowa	664,986	577,825
Central Pacific	10,476 000	11,545,125
Chicago & Alton	3,859,561	3,805,579
Chicago & Eastern Illinois	698,400	787,307
Chicago, Milwaukee & St. Paul	10,428,000	10,688,938
Chicago & Northwestern	10,570,599	10,888,915
Chicago, St. Paul, Minn. & O	2,654,344	2,363,905
Chicago & West Michigan	764,031	754,741
Cincinnati, Indiana, St. Lawrence & Chic.	1,110,153	1,155,132
Cincinnati, Washington & Baltimore*	759,499	821,432
Cleveland, Akron & Colorado	235,604	250,431
Des Moines & Ft. Dodge*	149,961	130,542
Detroit, Lansing & Northwestern*	644,681	695,136
Evansville & Terre Haute	327,646	338,238
Flint & Pere Marquette	1,211,495	1,262,002
Florida Railway & Nav. Co	518,791	441,022
Ft. Worth & Denver*	216,500	163,700
Grand Trunk of Canada†	7,968,503	9,032,379
Green Bay, Win. & St. Paul	170,841	191,021
Gulf, Col. & Santa Fe	797,658	836,700
Ill. Cent. (Ill. line & So. D.)	4,807,613	4,969,667
Do. (Ia. eased lines.)	792,926	930,527
Ind., Bloomington & West	1,221,621	1,387,514
Kansas City, Ft. S. & Gulf*	1,097,583	835,060
Lake Shore & Michigan Southern	7,330,900	9,219,171
Little Rock & Ft. Smith	225,405	242,934
Little Rock, M. R. & Tex	154,330	185,287
Long Island	1,127,055	1,092,815
Louisville & Nashville	6,564,571	6,375,383
Marq., Houghton & Ont*	394,205	225,652
Memphis & Charleston*	627,668	541,907
Michigan Central & Canada Southern	5,603,500	6,740,000
Mil. Lake Shore & Western	525,895	475,813
Milwaukee & Northern	255,423	229,670
Mobile & Ohio	972,155	963,146
Norfolk & Western*	1,2.5,036	1,161,222
Shenandoah Valley*	334,237	337,844
Northern Pacific	5,93?,218	3,581,060
Peoria, Dec. & Evansville	363,284	333,989
Richmond & Danville	1,828,085	1,764 715
Rochester & Pittsburg	518 002	210,209
St. L. A. & T. H. main line*	652,749	663,294
Do. do. (branches)	378,591	393,348
St. L., Ft. Scott & Wich	223,452	89,385
St. Louis & San Francisco	2,118,9 6	1,696,972
St. Paul & Duluth	495,734	514,098
St. Paul, Minn. & Man	3,657,518	3,912,542
Wisconsin Central*	682,672	636,171
Total (5) roads)	$107,698,125	$109,900,045
Net decrease		2,201,920

*Includes three weeks only of June in each year.
†From Jan. 1 to June 28.

A GAME OF BRAG.

Option trading is a kind of speculation that is so near akin to gambling, that except for the disagreeable odor which attaches to the latter term, it is difficult for the unprejudiced observer to distinguish between them. Option trading is not dealing in actual merchandise. The buyer of an option in wheat or coffee or petroleum never expects to take delivery, much less does the seller expect to deliver; they are merely betting on fluctuations of price, and are looking to nothing more than paying or receiving a difference which is determined by formulated rules. A merchant, according to the old acceptation of that term—and the definition has not changed—required not only special business training, but long experience, sound judgment, ample credit founded upon substantial capital, boldness as distinguished from rashness in executing well matured plans, uncompromising integrity and untarnished reputation. These requisites have always been recognized as essential in the past, and are held to be to-day a *sine qua non* of success. To be an operator, as that term is used at present, requires no special training, but a kind of innate shrewdness that deals continually with deception, and is a constant struggle to gain the advantage by appearing to be doing one thing while actually engaged in another—a systematic game of brag, a disregard of the interests of every one but self. The success of one is the result of long and patient labor—the success of the other is expected to reward the feverish activity of ten or a dozen years. The one tends to intellectual development, the other narrows and dwarfs the intellect. The one has rarely blunted moral rectitude, but, on the other hand, has strengthened the foundations of mercantile honor and honesty, while the other has developed a class of genteel criminals who generally manage to escape punishment, and who look upon themselves as reputable members of the community. Option trading has the countenance of many worthy merchants, because by joining these gambling associations they have imagined they were keeping abreast of the times, but the evil tendency has been too clearly demonstrated within the past month, and if there is any value in these expensive lessons of experience, they ought to be heeded at once.—*N. Y. Shipping List.*

AMERICAN WHEAT RESERVES.

Around and about these days is termed in the wheat trade what farmers call "between hay and grass time," a period when supplies from the old crops are running low, and the harvest of new scarcely ready for marketing at the ports. It is a good plan in all kinds of business to take an account of stock at least once a year, and in the wheat trade probably the first day of July is the more desirable date for this purpose, since at that time the wheat harvest in this country may in ordinary seasons be said to be fairly under way in the earlier wheat states. The difference between taking an account of the wheat stock of the country and the stock-taking of a merchant is, that the former is composed so much more largely of estimates than the latter. In many respects it is the difference between the abstract and the concrete. As regards our present wheat supplies, probably the best starting point for calculating their extent is to begin with July 1, 1882, when the "visible supply" was only about 10,000,000 bushels, and when the "invisible supply" had also been reduced remarkably low; lower, probably, in proportion to the population than at any corresponding date in many years past. After looking the ground carefully over, the *Reporter* submits for the consideration of its readers the following table as fairly representative of the production, domestic requirements and exports of the United States during the two years ended July 1, 1884, and of the supplies then remaining on hand from the crops of those two years.

ESTIMATED UNITED STATES WHEAT SURPLUS JULY 1, 1884.

		Bushels of 60 lbs. each.
Crop 1882, 504,000,000 bushels measure of 57 lbs. average weight each, equals		478,800,000
Crop 1883, 420,000,000 bushels measure of 55 lbs. average weight each, equals		385,000,000
Total supply from the crops of 1882 and 1883		863,800,000
Deduct.		
Seeding 1883 crop 37,000,000 acres.		
Seeding 1884 crop 37,550,000 acres.		
Total, 74,550,000 acres, at 1⅜ bus. ea.		102,500,000
Consumption 1882-83 of 54,470,000 population 4 30-60 per capita	245,115,000	791,300,000
Consumption 1883-84 of 56,100,000 population 4 30-60 per capita	252,450,000	487,565,000
		263,735,000
Exports July 1, 1882 to July 1, 1883	147,810,000	
Exports July 1, 1883 to May 31, 1884	100,126,100	
June, 1884, estimated	4,063,900	104,190,000	252,000,000
Residue: Addition to reserve for two years ended July 1, 1884		11,735,000

As the above table is compiled by a different method from any hitherto used by the *Reporter* in that the outer column, and consequently the result, represents bushels of 60 pounds weight, instead of bushels measure, some explanation why this different plan is now brought into use appears to be proper. It is evident to us that, owing to the great difference in the average weight per measured bushel of different crops that in using measured bushels as a basis of supply as formerly, when the exports represent bushels of 60 pounds weight, the subtraction of the one from the other must leave an erroneous and deceptive reminder as to the quantity left at home; hence the adoption of the plan now used. The crop of 1882 was not of full average weight per measured bushel, and 57 pounds for it is doubtless high enough. The 1883 crop, both in California and on this side of the Rocky Mountains, was still more deficient in weight, and is placed at an average of 55 pounds. For the same reason, the per capita consumption is reduced to what may be considered a fair average in weight, the rate used by the *Reporter* in former tables having been 4.70 bushels measure—the average annual quantity for the five years ended June 30, 1883.

According to our table the United States will enter the crop of the present year with an addition to their exceedingly small reserves of 1882, of less than 12,030,000. Of course, our estimates are at the best merely an effort to arrive at a reasonably reliable result; and in the nature of the case that is as much as any one can do. But one thing is certain, if any reliability at all is to be placed upon the statements of millers and dealers generally throughout the wheat-growing region, it is, that supplies are very low, and of good milling grain extraordinarily so. It may well be doubted, therefore, whether there is any more, if as much old wheat in the hands of farmers now in proportion to our population, as there was two years ago, when their barn floors were pretty well swept.—*New York Produce Exchange Reporter.*

WHITNEY AND HIS COTTON GIN.

The revolution wrought by the cotton-gin is a story familiar to every school-boy and girl in the land. That a young Yankee, drifting off to the South to teach school, who had never seen a cotton-field till he had reached his twenty-eighth year, should have invented a machine to perform easily and rapidly the slow and difficult work of separating the cotton from the seed, is of itself wonderful; but that he made his own tools, and even drew his own wire is still more remarkable. That he did these things is a fact. His patron, the widow of the Revolutionary General Greene, early discovered his inventive genius and set him to work on this line, and informed some of her neighbors of what the young Massachusetts school-teacher was doing, so that it came to be noised abroad, and the liveliest interest was created, not only in the vicinity of the Greene estate but also throughout the state. It seems that then, as ever since, there were those who could not see a man with a contrivance of his own invention that had a fortune in it without being covetous, and the next step for covetousness to take is to steal. So before Whitney's cotton-gin was quite completed his work-shop was broken into and the machine taken away. He scarcely had time to finish his model and obtain his patent before several machines patented after his one had been made, and were being operated. He brought suits against those who were infringing on his patent, but still infringements were learned of, and although he, with a Mr. Miller as partner, went into the manufacture of cotton-gins in Connecticut, yet his lawsuits consumed the profits. The legislature of South Carolina voted him the sum of $50,000 for his invention, but that, too, was paid only after trying delays and lawsuits. The state of North Carolina allowed a certain sum for the use of each saw for five years, and this was collected and paid over to the patentees in good faith, and Tennessee promised to do likewise, but afterward refused to fulfill her part. Then followed years of trouble and loss and lawsuits, the destruction by fire of his factory, the report that the use of his machine injured the fiber of the cotton, the refusal of Congress to allow his patent to be renewed, and finally, the death of his partner. At last, realizing that he would never receive a fair return for his invention and the labor he had spent upon it, he turned his attention to the manufacture of firearms for the government, and made his fortune in that business. It may be mentioned as an interesting fact that he was the first who made each single portion of the gun adapted to any one of the thousands of arms in process of manufacture at the same time. So he began by making gins and ended by making guns.

A SPECULATOR'S 'PLAINT.

Break! Broke! Break!
On thy marginless shares, O. C.
For I would that I could recover
The fortune I lost in thee!

Oh, well for the broker bold,
That he buys and sells on the floor,
Oh, well for the fortunate wight
Who hath gold in great galore!

For the price goes down, down, down,
And the tape I consult in dismay,
And the money invested in railway stock
Have vanished forever and aye!

Break! Broke! Break!
On thy marginless shares, O. C.!
But the spectral form of a fortune that's gone
Will ever be haunting me.

—*Yonkers Gazette.*

Miscellaneous.

counties, Iowa, property as follows: At Clearfield, new steam elevator and grist mill, lots, office, wagon scale, hopper scale. Everything complete, including a new Victor Sheller and Cleaner. Also, at each of the following stations: New Market, Gravity, Sharps, Conway, Goshen and Grand River, a warehouse and fixtures. The above property is all in good condition. Crop prospects excellent, all that could be desired. Titles perfect. Terms reasonable. Will take good unimproved land in part payment. Possession given at any time. Address
N. J. STRATTON, Maryville, Mo.

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Careful attention given to consignments and orders for wheat, flour and bran, filled at lowest prices.
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GRAIN AND FLOUR,
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REFERENCES: Western National Bank; Citizens' National Bank.

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R. B. HOWARD,
Commission Merchant,
GRAIN, MILLSTUFFS, HAY, Etc.
No. 162 La Salle Street,
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BUTTER, CHEESE, EGGS, POULTRY,
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KANSAS WHEAT.

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The Chicago Scale Co. sell Scales of all kinds also Portable Forges and Blacksmiths' Tools of all descriptions at about one-half usual prices. Buyers will save money by sending for their Price List.

Elevator Men—Howes & Ewell, of Silver Creek, N. Y., make a full line of wheat cleaning machinery. Read their advertisement on first cover page

R. JAS. ABERNATHEY,
General Agent for the Barnard & Leas Mfg. Co for Kansas, Western Missouri and Southern Nebraska. Address.
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GLASCO, KANSAS, January 4, 1884.
Barnard & Leas Mfg. Co., Moline, Ill.:
GENTLEMEN—After having used your *Victor Corn Sheller* and *No. 1 Improved Corn Cleaner* in our elevator for some six months, we wish to congratulate you upon furnishing the *ne plus ultra* of Corn Shellers and Cleaners.
We have never used the equal of the machines you furnished us. They do their work to our entire satisfaction. Very respectfully yours,
W. R. WEST & CO.

BALTIMORE, MD., January 29, 1884.
Barnard & Leas Mfg. Co., Moline, Ill.:
GENTLEMEN—Your draft in payment of No. 3 Warehouse Separator and Grader purchased of you, was presented several days ago, and paid. The machine gives us great satisfaction, and we unhesitatingly say that we believe it to be the *best* one in the market for cleaning and grading *all kinds* of grain. We shall take pleasure in recommending it to any one wanting such a machine. Our only regret is that we did not get one of double the capacity. Very respectfully,
SWIFT & LUCY.

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Either Eight or Left.

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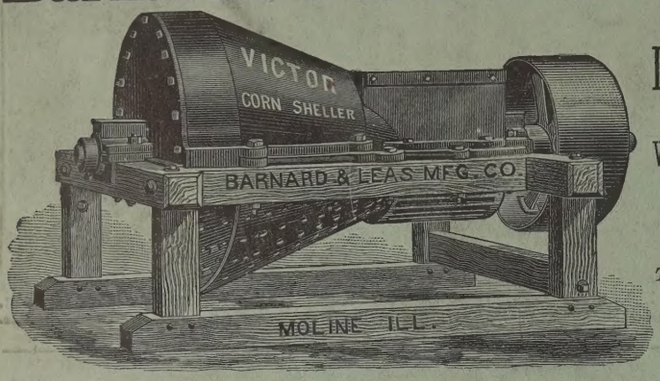

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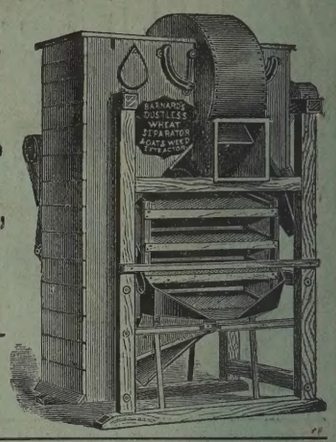

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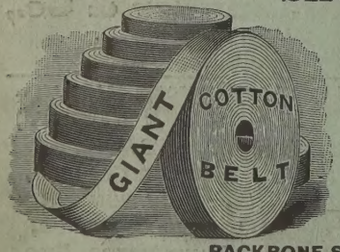

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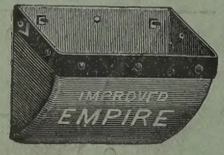

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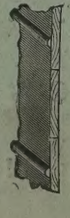

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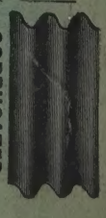

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